



BADGER STATE Smoke Signals

Serving Amateur Radio in Wisconsin



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THE GREAT CIRCUS TRAIN

The Great Circus Train didn't huff and puff out of the Chicago and North Western railroad yard in Baraboo on July 7; steam locomotive 1385, from the Mid Continent Railroad Museum in North Freedom, Wisconsin, developed a problem. The train did leave, about an hour late, pulled by a diesel engine, and headed down the tracks, beginning its annual two-day odyssey to Milwaukee via Janesville and the Chicago area, hauling its priceless cargo of beautiful and colorful circus wagons to be seen in the Great Circus Parade.

Several passenger coaches are at the rear of the train, carrying media personnel, parade officials, and invited guests. To serve those passengers, several Amateur Radio operators were aboard, furnishing communications by both Amateur Radio and mobile telephone. (It was by mobile telephone that we learned, when we were near Janesville, that the steam locomotive was expected to be repaired and ready to pull the train on day 2 - and it was, and it did. The repair crew at the Mid-Continent Railroad Museum did a fine job under a lot of pressure!)

An amateur television setup was brought along. Ron Armstrong, WB9WRW, who drove the chase van again this year,



pulled into the rail yards, set up the camera, and the operators aboard the train were able to see the train as it arrived.

Shown at left in the cover photo is Fred Wendt, W9ZAG, one of the Milwaukee ARES operators aboard the train, with Wisconsin Governor Tommy Thompson.

You'll find more about the Great Circus Train Hams, including photos, elsewhere this issue.

-- K9ZZ

220 Update

ARRL President Larry Price, W4RA, and Washington Coordinator Perry Williams, W1UED, met with FCC Commissioner James Quello and other FCC officials on June 17. President Price explained the Amateur views on Docket 87-14, and answered numerous questions, mostly concerning 220-MHz activity. Meanwhile, the FCC Office of Engineering and Technology has extended the deadline for reply comments in General Docket 87-14. Reply comments are now due at the FCC by July 31, 1987.

The deadline was extended at the request of several petitioners due to the disorganized state of the more than 20 volumes of comments. The petitioners said they felt they had not found

(Please turn to page 9)

N9FZS Wins Maxim Award

Scott L. Young, N9FZS, of Colby, Wisconsin, was selected as the winner of the 1986 Hiram Percy Maxim Award by the Board of Directors of the American Radio Relay League at their second meeting of 1987, held July 9 and 10 in Atlanta, Georgia.

Scott was nominated for the award by Mike Schoenfuss, N9GHZ. The supporting paperwork was sent to Wisconsin Section Manager Richard R. Regent, K9GDF, who forwarded the information to ARRL Headquarters.

The requirements for the award are exemplification of the basis and purpose of the Amateur Radio Service, including contributions to public service, technical development, operating, recruitment, public relations, and other Amateur Radio-related

activities.

Scott, who is 18 years of age, is a member of the Taylor County Amateur Radio Club, and holds a Technician Class license. His interests in Ham Radio include 2-meter Packet and voice operation.

He plans to attend the Milwaukee School of Engineering, where he expects to major in Electrical Engineering.

In winning the award, Scott will receive \$1000, an engraved plaque, and travel, accommodations and expenses to attend an ARRL convention, where he will be given the award in a formal presentation.

Scott's father is Louis, KA9UXN, and he has a brother, Dean, who is licensed as KA9SMQ.

-- K9GDF, K9ZZ

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Badger State Smoke Signals

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The opinions expressed in editorials, guest editorials, columns, and letters are the opinion of the authors only, and do not, unless otherwise stated, express or imply agreement or endorsement by Badger State Smoke Signals, or any other organization.

OOPS!

Longfellow Revisited.

I shot an error into the air,
It fell down and I knew where.
It fell where all my errors fall,
Where they quickly are seen by all.
--Richard Armour.

A few errors crept into last month's issue of BSSS. From the Misc. column, Jack's call is KB9WC, not KC9WC, and the WAR Treasurer is Dennis Krueger, N9AOZ. On the YARC page, calls were wrong for: Harry Mayland, K9FFT, Harry Westlund, K9EHJ, and Ken Johnson, K9DZG. Sorry about that fellows. Guess we just had a bad month with names and calls.

Swapfests and other Social Events

August 9, 1987. Hamfester's Radio Club, Inc., 53rd Annual Hamfest, Willow Springs, IL. (Near Chicago) Contact: John Schipitsch, W9BNR, 13058 Finch Court, Lockport, IL 60441.

Saturday, August 15, 1987. Rhinelander Swapfest, sponsored by Northwoods Amateur Radio

Club and ARES. You may set up in the parking lot using our tailgate flea market. (No tables furnished) At this swapfest you never have to bring anything home. At 1:00 p.m. you can sell what you have left at our auction. Contact: Leonard Bauman, K9RMN, 1312 Dorothy St., Rhinelander, WI 54501. (715) 369-3296 (See ad elsewhere in this issue for further information.)

Saturday, August 15, 1987. The Green Bay Mike & Key Club's Summer Swapfest. Community Service Center at 1637 Dousman St., Green Bay, WI. Amateur Radio examinations. 8 ft. tables, \$5.00. Admission, \$1.00.

August 22, 1987: Green Fox ARC sixth annual picnic and auction at Zobel Park, one mile north of Highway 23 on Highway 49, 12 p.m. through 5 p.m. Free food and drinks. No admission charge.

The Wisconsin Nets Association will hold its Annual Picnic on September 12th at Shawano County Park (near County HHH, 4 miles north of Highway 29 at Shawano Lake's north shore), with camping, swimming and boating facilities. The picnic festivities are at noon and meeting at 1:00 p.m. with door prizes, refreshments, mini-swapfest and awards later. Bring a friend or your entire family and a few junkbox items to trade. You don't have to be a traffic handler or member, everyone is welcome at the WNA Picnic.

September 19-20, 1987. Peoria Superfest '87, Peoria, IL. Contact: Superfest '87, P.O. Box 3461, Peoria, IL 61614.

Sunday September 20, 1987. Fall Fest sponsored by the Tri-County ARC, at the Blackhawk Technical Institute between Beloit and Janesville on Highway 51. \$2.00 per person, buy or sell. Bring your own table to this outdoor event. For more information contact: Carl Searing, KW9W, 249 N. Tratt St., Whitewater, WI 53190

September 26-27, 1987. Radio Expo-87, Lake County Fairgrounds, Grays Lake, IL. Contact: CFMC, P.O. Box 1532, Evanston, IL 60204.

September 26-27, 1987. Computer and Electronics Show & Sale. DuPage County Fairground, Wheaton, IL. Contact: Midwest Computer Shows, Inc. 6N351 Keeney Road, Roselle, IL, 60172. 1-800-443-8693.

Sunday, October 25, 1987. Kettle Moraine Radio Amateurs Ham, Computer, and Video Fest at Waukesha, WI. Contact: KMRA, 313 Hillview Circle, Waukesha, WI 53188

Sunday, November 1, 1987. Late Fall Hamfest at the Lake County Fairgrounds, Grayslake, IL. Contact CAT, 637 Emerald St., Mundelein, IL, 60060

November 7, 1987. AMSAT, 5th Annual General Meeting and Space Symposium, Southfield MI. Contact: AMSAT, P.O. Box 1091, Ann Arbor, MI 48109-1091

Saturday, November 14, 1987. 6.91 Friendly Fest, at Serb Hall, 51st & Oklahoma, Milwaukee, WI. Amateur Radio Exams. Admission: \$2.00 advance or \$3.00 at the door. Tables \$3.00 advance or \$4.00 at the door. SASE with check to The Milwaukee Repeater Club, PO Box 2123, Milwaukee WI, 53201

Sunday, November 15, 1987. 1987 Rockford Hamfest and Illinois ARRL Convention at Rockford, IL. Tickets \$3.00 advance or \$4.00 at the door. 8' table with 2 chairs, \$5.00. Outdoor space, \$2.00. For advance tickets send SASE to Rockford Hamfest, 6514 Swansdown Dr., Rockford, IL 61111. For Booth and Table reservations send SASE to Roger Sawvell, KD9MQ, 6514 Swansdown Dr. Rockford, IL 61111, or call: 815-282-1283

As a service to our readers, this section of Badger State Smoke Signals is available without charge to list your upcoming Swapfest, Hamfest, dinner, picnic, party or other event of interest to Radio Amateurs in Wisconsin and nearby areas.

Send information on your event to Kenneth A. Ebner, K9EN, 822 Wauona Trail, Portage, WI 53901. In addition, space is available at attractive rates on our advertising pages, and/or we can include your flyers. For information on rates and requirements for our advertising pages, and/or for including flyers, please contact K9ZZ or K9EN.

Club Meetings

BADGER AMATEUR RADIO SOCIETY

(W9YT - UNIVERSITY OF WISCONSIN - MADISON)

Monthly while school in session - 2nd Wednesday - 7:30 p.m. - 8-314, Electrical Engineering Building.

CENTRAL WISCONSIN RADIO AMATEURS, LTD.

(STEVENS POINT)

Second Wednesday.

EAU CLAIRE AMATEUR RADIO CLUB

2nd Tuesday - 7:30 p.m. - Parks and Recreation Bldg., Oxford and 1st Streets, Eau Claire. Hams, guests welcome. Travelers welcome on wide area club repeater K9UXP, 146.31/91.

FOUR LAKES AMATEUR RADIO CLUB (MADISON WI)

First and third Tuesdays - 7:30 p.m. - Red Cross Bldg., 4860 Sheboygan Ave.

FOX CITIES AMATEUR RADIO CLUB

Third Monday - 7:00 p.m. - Roosevelt Jr. High School, 318 E. Brewster St., Appleton. Info: (414) 735-6294.

GREEN BAY MIKE AND KEY CLUB

Second Thursday - Red Cross Bldg., corner Danz and Deckner, Green Bay.

GREEN FOX AMATEUR RADIO CLUB

Third Monday - 7:30 p.m. - Green Lake Town Hall, int. of county hwy. K and N.

KETTLE MORaine RADIO AMATEURS

Second Friday.

MANITOWOC COUNTY RADIO AMATEURS

First Wednesday - 7:00 p.m. - City Hall, 817 Franklin St., Manitowoc.
Second Wednesday - Red Cross Building, 1816 Washington St., Manitowoc.

MENOMONEE FALLS AMATEUR RADIO CLUB

Last Tuesday - Doors open 7:30 p.m., meeting begins 8:00 p.m. - Security Savings and Loan, Menomonee Falls. Amateurs and guests welcome.

MILWAUKEE RADIO AMATEURS CLUB

Second Thursday - Wauwatosa Savings and Loan, 7500 W. State St.

OZAUKEE RADIO CLUB

Second Wednesday - 7:30 p.m. - Saukville Community Center.

RIVERLAND AMATEUR RADIO CLUB
First Tuesday - 7:30 p.m. - Onalaska Community Center, Onalaska WI.

ROCK RIVER RADIO CLUB
First Tuesday - 8:00 p.m. - Dodge County Sheriff's Dep't, 141 N. Main, Juneau WI.

SHEBOYGAN COUNTY AMATEUR RADIO CLUB
Second Tuesday - 7:00 p.m. - Sheboygan Red Cross/Boy Scout Bldg., 2032 Erie Ave.

SOUTH MILWAUKEE AMATEUR RADIO CLUB
First Wednesday - Legion Post 434, Shepard Ave., Oak Creek WI. Auctions in March and October.

WEST ALLIS RADIO AMATEURS CLUB
Second Tuesday - 8:00 p.m. - St. Francis Savings, 9330 W. Greenfield Ave.

WISCONSIN VALLEY RADIO ASSOCIATION (WAUSAU)
First Tuesday - 7:30 p.m. - Location varies; info on 146.04/64, Wausau.

YELLOW THUNDER AMATEUR RADIO CLUB (BARABOO)
Days rotate: Thu., Aug. 13; Mon., Sep. 14; Tue., Oct. 13; Wed., Nov. 11; Thu., Dec. 10. Monday meetings in room 20; all others room 25. Meetings start 7:30 p.m.

Let Badger State Smoke Signals know your club's meeting dates, and we will let our readers know of your meetings and activities. There may be Amateurs in your area interested in joining your club, or members of other interested in making an interclub visit.

The TEST POINT



The following are known locations where Amateur Radio license examinations are scheduled in the Badger State area.

August 9, 1987	St. Cloud, MN
August 13, 1987	Milwaukee, WI (MRAC)
August 15, 1987	Milwaukee, WI (BE)
August 15, 1987	Green Bay, WI
August 22, 1987	Rhineland, WI
August 29, 1987	Annandale, MN (Robbinsdale ARC)
September 19, 1987	Milwaukee, WI (BE)
September 19, 1987	St. Paul, MN
September 26, 1987	Wisconsin Rapids, WI
October 17, 1987	Milwaukee, WI (BE)
October 17, 1987	Rhineland, WI
October 17, 1987	Minneapolis, MN
November 7, 1987	Richfield, MN (Robbinsdale ARC)
November 21, 1987	
December 5, 1987	Stevens Point, WI
December 19, 1987	Milwaukee, WI (BE)
December 19, 1987	Rhineland, WI
December 19, 1987	St. Paul, MN

Monthly, First Sat. Racine, WI
Monthly, Third Sat. Loves Park, IL

GENERAL RULES FOR MOST EXAMINATIONS:

Most examinations require filing an FCC Form 610 and advance registration at least 30 days before the exam date. (Some VECs permit walkins.)

Check with sponsor to find out if they allow walkins.)

To register, you must first secure a copy of the current FCC Form 610 and fill it out completely (AND CORRECTLY). Get your form from an FCC Field Office, the ARRL or Badger State Smoke Signals. Send a 22¢ SASE if you request one from the ARRL or BSSS. In most cases, forms can also be obtained from the sponsoring group.

ARRL/VEC examinations require a check for \$4.35 payable to "ARRL/VEC".

The FCC now requires applicants to show their original Amateur license to the VEC. A copy of your license must be attached to your FCC form 610.

Technician class licensees must show proof of testing before March 21, 1987, in order to upgrade to General with a code test only.

Additional information is given below.

Thursday, August 13, 1987
MILWAUKEE METRO AREA TEST TEAM - MRAC/VEC
Wauwatosa Savings and Loan Building, 7500 West State Street, lower level.

Bring your original license and 2 good photocopies, a pen, and \$4.35 for the exam fee. Walkins accommodated if time permits.

Register in advance on a Postal Service 14 cent postcard; print the grade of license you are applying for, your name, address, and telephone number. Send to: The Milwaukee Radio Amateurs' Club, Inc., N50 W16328 Pin Oak Court, Menomonee Falls WI 53051.

BADGER EXAMINERS
August 15; September 19; October 17; November 21; December 19.

All examinations from 1:00 p.m. until 4:00 p.m. unless otherwise noted.

Examinations held at St. Nicholas Parish (unless otherwise noted), 5353 N. Green Bay Ave., Milwaukee (2 1/2 blocks south of Silver Spring.)

Technician class licensees must show proof of testing before March 21, 1987, in order to upgrade to General with a code test only.

Advance registrations preferred. Contact Mickey Dolgin, KB9G, 507 E. Spooner Rd., Fox Point WI 53217. (414) 351-5311.

GREEN BAY, WI
Contact: Larry Siebers, KD9IA, 7077 Weyers Rd., Freedom, WI 54130, 414-788-3823

RHINELANDER, WI - NICOLET COLLEGE
Science Center, Fireside Room - (DeVry VEC)
Contact: Len Bauman, K9RMN, 1312 Dorothy St., Rhineland, WI 54501, (715) 369-3296

WISCONSIN RAPIDS, WI - VOCATIONAL SCHOOL
Contact: Gene Santoski, K9UTQ, 1220 18th St., So., Wisconsin Rapids, WI 54494, (715) 423-6368

STEVENS POINT, WI - BLUE TOP INN
Contact: Joe Larson, N9JW, 644 Portage St., Stevens Point, WI 54481, (715) 344-1182

RACINE, WISCONSIN - ARRL/VEC
First Saturday of each month except during summer and the Christmas holidays.

Exams are given at the Red Cross Building, 4521 Taylor Avenue, Racine WI 53405.

Bring your original license and a photocopy of it; also bring some form of photo identification, such as a Wisconsin photo driver's license,

and a check for \$4.35 payable to ARRL/VEC.

Pre-registration at least 40 days before the test is desired, but walkins are permitted and will be accommodated until the extra supply of exams is exhausted.

Send pre-registration to: William R. Firchol, Jr., N9DMP, 1912 27th Street, Kenosha WI 53140.

Third Saturday of every month.
Northern Illinois Volunteer Examiners (DeVry VEC). Held at North Suburban Library on North Second Street in Loves Park, IL.
Contact: Gene Melton, AK9N, 2901 Billie Rd., Rockford, IL 61109, (815) 874-6867

MINNESOTA TESTS
Gopher/Minneapolis ARC: Robbinsdale ARC:
Avery Finn, KØHLA Ron Schaultz, NAØU
P.O. Box 53 6308 Peacedale Ave.
Hopkins, MN 55343 Edina, MN 55424
(612) 448-5384 (612) 920-7473
St. Paul ARC: St. Cloud ARC:
Jay Bellows, KØQBE P.O. Box 141
997 Portland Ave. St. Cloud, MN 56302
St. Paul, MN 55104 Leonard E. Carlson
(612) 222-7253 (612) 252-0414

LOCATIONS:
University of Minnesota Moos Hall, Washington and Union Streets, Minneapolis.
Medina Ballroom, Midwinter Madness Hamfest, Medina, Minnesota.
St. Luke's School, 1005 Summit Ave., St. Paul, Minnesota.
North Memorial Medical Center, 3300 Oakdale Ave. N., Robbinsdale, Minnesota.
Minnesota State Fairgrounds, Amateur Fair Hamfest, St. Paul, Minnesota.
St. Cloud, Minn., Annual Hamfest.
Handi-Hams Camp Courage, Annandale, Minnesota.
Richfield, Minnesota, Hamfest Minnesota and Computer Expo.

(ed note.) Thanks to Marv Mahre, WØMGI for the Minnesota information. If you are interested in any of the Minnesota tests, we suggest that you save the above information as we may not be able to have the complete list in every issue of Smoke Signals.

This section of Badger State Smoke Signals is available to publicize your Volunteer Examiner Amateur Radio license examination schedules.

Please send us your schedules of dates, times, and locations that you will be conducting examinations and we will include the information here. Be sure to include contact address and any other necessary requirements. Information should be sent to K9EN or K9ZZ at the address shown on page 2.

Son: Mom, I crashed the car and Dad knows about it.
Mom: What did he say?
Son: Do you want me to leave out the cuss words?
Mom: Yes.
Son: He didn't say anything.

Did you hear about the termite who having lost all his teeth, stopped by the local tavern, and asked "Is the bartender here?"

Henry -- Guy who's wound up.
Micro Henry -- Little guy who's wound up.

Yellow Thunder Amateur Radio Club

**K9ODK
WB9FDZ**

The next meeting of the YTARC will be held Thursday, August 13, 1987, in room 25 of the Baraboo Civic Center, Baraboo, Wisconsin.

The July 15, 1987 meeting of the Yellow Thunder Amateur Radio Club, Inc. was called to order by the President, Steve Schwoegler, WB9RNL, at 7:45 p.m.

The following members and guests were present:

Steve R. Schwoegler, WB9RNL	Wis. Dells
Art Kleefisch, W9WSS	Baraboo
Harry Westlund, K9EHJ	Baraboo
Duane Grotophorst, KA9HKL	Sauk City
H. C. Mayland, K9FFT	Baraboo
Jim Decker, WB9UQT	Baraboo
Ken Ebnetter, K9EN	Portage
Jim Romelfanger, K9ZZ	Baraboo
Harold Reif, KA9YQP	Baraboo
Bob King, KA9GNY (guest)	Baraboo
Leonard Budd, KBØSP (guest)	Baraboo
John Imray (guest)	Baraboo

A Motion for acceptance of the minutes as published in Smoke Signals was made by Ken Ebnetter, K9EN, and seconded by Duane Grotophorst, KA9HKL. The motion passed.

The Treasurers report was given by the Treasurer, Jim Decker, WB9UQT as: \$236.47 in the operating fund, and a total balance of \$254.84 in all accounts.

The Secretary had no communications.

It was decided that the program for the October 13, 1987 meeting would be a slide presentation produced by the ARRL. The subject to be chosen from the list the club selected previously.

Since there was no response from members Paul Amend, KA9OBP and Ruth Fameletti, regarding non-payment of dues, membership in the YTARC will be terminated as provided by the By-laws.

September 2, 1987 was designated as an executive meeting night for future club planning. The place to be announced later.

Tonight was "Special Events Night". An ovation was extended to Duane Grotophorst, KA9HKL, for upgrading to Extra Class. He will retain his same call. Another round of congrats went to Harold "It's never too late" Reif, KA9YQP, for getting his novice ticket.

At this point, the President called for a short recess. The club then indulged in coffee and cake and sang "Happy Birthday" to Harold Reif in celebration of Harold's 87th Birthday.

This evenings program was a talk by guest Mr. John Imray, a teacher in the Baraboo Jr. High School. Mr. Imray spoke of the new approach to the schools teaching of communications. Mr. Imray said if enough interest was gotten from the

student body, he would get a radio club started at the school. The YTARC offered to cooperate wherever possible in the program. The YTARC donated several copies of "Tune in the World" to Mr. Imray to help start the program.

Buck Nite drawing was won by Gordon Grant, W9ULM, who was not present. Next meetings drawing will be \$3.00.

The meeting was adjourned at 9:55. The next meeting is August 13, 1987.

Respectfully submitted,
Harry Westlund, K9EHJ, Secretary

YTARC BIRTHDAZE

Jim Decker	WB9UQT	August	16
Ken Johnson	K9DZG	August	25

SENTENCE SERMON

Great were the hearts, and strong the minds,
Of those who framed, in high debate,
The immortal league of love that binds
Our fair broad empire, state by state.

--William Cullen Bryant

TO ALL RADIO AMATEURS:

The Green Fox Amateur Radio Club, Incorporated cordially invites you and your family to it's SIXTH ANNUAL PICNIC on Saturday, August 22, 1987.

The picnic will be held at Zobel Park located one mile north of State HWY 23 on State HWY 49 (Green Lake County) beginning at 12 noon. GFARC will supply free food and refreshments including sweet corn, brats, hamburgers, hot dogs, side dishes, desserts, beer, sodas, coffee and all the trimmings. Bring the family! Bring a friend! (Sorry, no pets are allowed in the park).

Along with the picnic we are having a free swapfest for those that have electronic gear they would like to see sold. Bring your own tables for the equipment. No commissions or charges to sellers!

Our 'bread and butter' for next year's picnic will come from proceeds from this year's auction held during the picnic. Auction items consist of just about anything that electricity will flow thru and we actively solicit donations for our auction (By no means is a donation required to attend the picnic!). If you have anything to donate, please contact Steve Loeffler - WB9ZRE at 414-748-3466 evenings or by packet via WA9SQU-2 or via WA9SXN and we might even be able to arrange to pick it up. During the auction, we will be giving away a few door prizes including two one year subscriptions to Worldradio, two ARRL 87-88 pocket repeater directories, an ARRL tie, and an ARRL scarf!

Our only request is that you let us know how many of you we can expect, so, please drop us a line at 123 West Oshkosh Street, Ripon, Wisconsin 54971 to inform us.

To date we have had exceptional weather for our picnic, however, should there be rain on August 22, the picnic will be held the following day - Sunday, August 23, 1987. Talk-in and additional information on 146.355/.955 in Green Lake County.

Who says there is no such thing as a free meal!!! Remember to mark your calendars and we will hope to see you there!

Big Dog: "My name is Rover, What's your Name?"
Small Dog: "I'm not sure, I think it's Down Boy."

FREE WANT ADS in BADGER STATE SMOKE SIGNALS

Yes, they are FREE. BSSS will run your WANT AD listing Amateur Radio related equipment you wish to buy, sell, trade, or whatever. Non-commercial listings only. Length and number of free ads may be subject to space limitations. We reserve the right to refuse any listing that we feel is inappropriate. Send to Kenneth A. Ebnetter, K9EN, 822 Wauona Trail, Portage, WI 53901.

FOR SALE: HQ-170 Radio. Communications receiver (160 to 6 meters), with speaker, mint condition. \$135.00. Ed Malinowski, Rte. 1, Loyal, WI, 54446, or call 715-255-9958 at 9:00 p.m.

FOR SALE: Connect System Private Patch II, Simplex Auto Patch. Contact: Larry Ssiebers, KD9IA, 7077 Weyers Rd., Freedom, WI 54131. 414-788-3823.

WANTED: Kenwood AT230 tuner or equal. Harry Westlund, K9EHJ, 720 Jefferson St., Baraboo, WI 53913.

FOR SALE: Heath Mohawk Receiver, \$50.00. Robot 400 SSTV converter, \$100.00. Ed Krogan, KEØOJ (ex-KA9RMO), Phone 319-425-4587.

FOR SALE: Mike: Electro Voice model 15, \$15.00; Transmitter: HT-37, \$80.00; Receiver: SX-111, \$50.00 Transceiver, HW-100, \$150.00. Robert Johnson, WB9EIW, N6646 Fawn Circle, Pardeeville. 53954. (608) 742-6460.

FOR SALE: Kenwood TS-180S, complete with power supply, speaker and Microphone. \$600.00. Lyle Lytle, W6599 C.T.H. P, Pardeeville, WI 53954. (608) 429-2656.

FOR SALE: 75 assorted stamps. \$1.00 - choose U.S./foreign. Richard R. Regent, K9GDF, 5003 South 26th St., Milwaukee, WI 53221.

WANTED: Sheets of the old five-cent Amateur Radio stamps issued in 1964. Gary Heilmann, WA9FRQ, 1171 Mather, Green Bay, WI 54303.

WANTED: Speaker cabinet for a Hammarlund HQ-129 or HQ-140. Mark Kopp, 5562 Hwy. 113-19, Waunakee, WI 53597. (608) 849-7578

WANTED: FC-102 antenna tuner. Joe Jarecki, KA9VKH. (715) 836-7854

WANTED: Phonograph records from 1950's, 60's & 70's, in good playable condition. AC9J, LaVonne. (608)-273-3217

WANTED: YAESU FT-101, 101E or 101EE with digital frequency readout meter. Rick Plouffe, Rte. 3, Box 33, lot 2. Baraboo, WI 53901.

FOR SALE: Lakeshore Industries P-400-GG linear, 80-10, and 11, 400 Watts out, 4-EL38s, clean. \$250.00. Palomar Engineers all-band pre-amp, 1.8-54 MHz., manual, clean. \$90.00. G. Loudon, N9CCI, 205 E. Main St., Omro, WI 54963. (414) 685-6172.

SMUG, Sinclair Milwaukee Users Group. Get full use of your ZX, TS1000 or TS2068. Write to SMUG, P.O. Box 101, Butler WI 53007.

ARRL Board Meets

The ARRL Board of Directors held its second 1987 meeting in Atlanta, Georgia on July 9 and 10.

In considering the FCC proposal for privatization of the special call sign system, the ARRL Board first strongly supported the concept that the assignment and issuance of call signs is a governmental function which should be carried out by the FCC. If the FCC nevertheless decides to delegate a part of the function, the ARRL would seek to undertake it, subject to certain conditions. Among these are there being only one entity, the FCC continuing to issue licenses and initial call signs, FCC continuing to maintain its own database, and the program being self supporting under a reasonable fee system.

The League will petition the FCC to require express FCC approval for reaccreditation of any prospective volunteer examiner whose previous examiner status has been suspended or revoked by any VEC.

The ARRL Humanitarian Award was conferred on Father Moran, 9N1MM. Scott L. Young, N9FZS, was selected to receive the 1986 Hiram Percy Maxim Award. The 1986 Technical Excellence Pewter Cup goes to Rich Arndt, WB4TLM, and Joe Fikes, KB4KVE, for their April 1986 QST article on capacitive filters.

Looking ahead to the possibility of a future international conference that might affect Amateur Radio frequency allocations, the Board instructed its officers to begin developing a long range plan for the League.

An historic amendment of the ARRL Articles of Association was adopted effective January 1, 1988. It completes action establishing autonomy for the Canadian Radio Relay League, the Canadian Division of the ARRL since 1920.

The Board authorized the refurbishing of the Maxim Memorial Station W1AW and raising of funds therefore, but placed the building of a visitors center at HQ in abeyance until a more fortuitous time. Funds will also be sought for a possible new ARRL station to serve the west coast, Alaska, Hawaii, and the Pacific.

The Board selected Dallas, Texas as the site of the Diamond Jubilee National Convention June 2 through 4, 1989.

The ARRL Volunteer Examiner Coordinator Program will be studied by the Volunteer Resources Committee, with an eye to streamlining it.

Standard operating procedures and rules for advisory committees have been revised.

The Board established the ARRL National Emergency Response Committee, ANERCOM, to plan and manage Amateur Radio response to disasters.

A memo of understanding with the Weather Service was authorized.

Novice eligibility for ARRL leadership and station appointments has been extended.

A Diamond Jubilee Worked All States award featuring the 12-meter band was authorized.

Plaques will be provided to the first 10 Amateurs to make DXCC on 6 meters and the first 10 on 2 meters.

The Legal Strategy Committee will develop guidelines for arbitration and mediation of disputes between repeater counsels.

An interim band plan for Packet Radio on frequencies up to 225 MHz was adopted. Advisory committees were asked to study Packet planning

for higher bands. Other studies include ways to reach state and local planning and landuse bodies with information on antenna rules, feasibility of a political action committee for Amateur Radio, and relocated beacon frequencies.

Minutes of the meeting will be in September QST. The next meeting of the Board will be in Hartford, Connecticut on January 22 and 23, 1988.

MISCELLANEOUS MISCELLANEOUS MISCELLANEOUS

Oh what the heck -- items of interest:

Oshkosh Amateur Radio Club, Inc.

THE INTERCOM

Following a recent meeting, a Fox Hunt was held. After almost 2 hours, no one was able to locate the fox, tho many were in the general location. Evidently the participants didn't realize that foxes have been know to climb trees, or in this case, flag poles!. Better luck next time.

West Allis Radio Amateurs Club

HAMTRIX

VHF DX -- Monday Night, June 29th, provided excitement on 2-meter SSB. A sporadic E opening occurred and lasted from about 8:00 pm to 9:30 pm. Stations were heard and worked in Florida, Georgia, Louisiana, Oklahoma, Texas and New Mexico. This unfortunate soul, (Roy Hawkins, WA9KEC) missed most of it but did manage to QSO WA9THJ near Houston, TX, for several minutes with S9 plus signals on both ends.

Our thanks to the above mentioned clubs and their bulletins for the information presented. Badger State Smoke Signals will be pleased to exchange bulletins and information with your club. Please contact K9ZZ or K9EN.

WNA - WSSN continued from page 16

get. Birthday and holiday messages to your neighbor's aunt and uncle may help sway public opinion. A message from San Diego Marine Boot Camp to your alderman advising him of the safe arrival of his son can't hurt the cause in a tower-zoning proposal before the city council. Planting the seeds of good will will yield a better crop than all of the fertilizer that Hams are accused (wrongfully or rightfully) of. The word fertilizer in the previous sentence is a sanitized version of another word. Please think it over before talking down nets or dismissing your participation in a net.

Somewhere in here there should be a report on the happenings of the WSSN. For those that read these columns for statistics, here they are. April, May and June figures are:

QNI	QTC	QSP	QTR
425	143	80	1220

The top stations for number of checkins are: W9NGP - 69; N9FVN - 64; AG9G - 34. KA9USV, Les, started checking in during the month of June and has been logged in 15 times. Just 15 more QNI in the next two months and Les will receive a Section Net Certificate. You too can get one of these certificates. All that it takes is 30 checkins within a 90-day period.

End of editorial/net report. Hope to see you at the WNA Picnic in September in Shawano.

73, Lee, N9BDL, NM

Antenna -- Uncle Joe's wife.

Dipole - Very sick tadpole.

HAM RADIO HISTORY

by Joe White, KØCNV

(reprinted from World Radio)

4 Billion BC: Earth is a swirling ball of flaming gases. Propagation is extremely poor.

1 Billion BC: First dry land appears. It is divided up into squares. County Hunters club is formed.

500 Million BC: Second patch of dry land appears. First DXpedition. Credit disallowed because of questionable licensing arrangement.

400 Million BC: Flowering plants and grasses evolve. Telrex invents first beam antenna but sales are slow because of lack of suitable structures.

300 Million BC: First tree appears. It is immediately cut down, stripped of branches, placed in a concrete base and named a telephone pole. Telrex sells first beam.

200 Million BC: Second beam sold by Telrex. Installer falls from top of pole. First safety belt sold.

100 Million BC: First mountain appears. Repeaters invented.

50 Million BC: It is decided by WARC that "seek you" is too cumbersome to send on CW. Abbreviation "CQ" is adopted.

4 Million BC: Humans replace swine as dominant species. The name "Ham Operator" hangs on, however.

3 Million BC: Dugout canoe invented. Maritime Mobile net formed on 14.313 MHz.

2 Million BC: to 800 AD: Nothing much happens for a long time.

900 AD: Chinese invent gunpowder. WY1AA is first "Big Gun" DXer.

1790 AD: Ben Franklin invents long wire receiving antenna. Ground switch invented.

1961 AD: Second repeater erected. First repeater group refuses to change frequency. First frequency coordinator appointed.

1987 AD: Amateur Radio Humor sinks to new low.

IT'S TRUE

(From The Ham Guide, WB4BAB Editor)

WX4CNT reports an incident that shows to what extremes some Amateurs go with their HTs. They wear them at all times. AT ALL TIMES.

At work, at play, clipped to their PJs at night, and yes, even when they go to the bathroom. Seems as how WX4JRK found himself in extremes in the powder room the other day. Someone had removed all the toilet tissue. HT to the rescue. A quick call to the XYL downstairs solved the problem. However, it also alerted 47 other repeater users to the catastrophe.

Offers of help poured in, advise was given freely, and the local ARES group was put on standby alert.

He who laughs last usually didn't understand the joke.

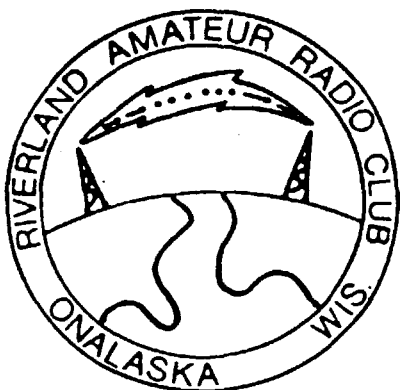
She: You'd better go, my husband just drove up!

He: Where's the back door?

She: We don't have one.

He: Where do you want one?

The above and others in this and previous issues of BSSS have been taken shamelessly from the ARNS bulletin and other sources.



On July 7, 1987, the regular meeting of the Riverland Amateur Radio Club was called to order by President Gary Webb, N19V. Secretary/Treasurer Dick, KØJYB, suggested not reading the minutes, as all members present had already read them in the BSSS. Charlie, KA9UUK, moved that we approve the minutes as printed in the BSSS. The Treasurer's report was read and approved.

OLD BUSINESS

Craig, N9ETD, reported on our Field Day event. On CW and PKT 565 points, Phone 1243 points, and total number of QSOs gave us a 5046 point total. In Class 3A, this may place us in the top 5%.

Craig called our attention to a phone call in re: Ham Radio to be held on AM radio station WKTY from 1:05 p.m. until 1:30 p.m. July 8, 1987. There will also be a Spotlight for 2 1/2 minutes at 10:30 a.m. on WKTY FM on the same day.

Craig also announced that this is the last day to place orders for Club Jackets.

Van, WA9FIO, gave a report on the status of the 37/97 repeater. He handed out a written report on the repeater as well as a price list of repeaters and control devices. Van told us that the Auto Patch is now working, but needs new 5K trim pots and is looking for a volunteer to replace the old pots. Van is in the process of repairing the controller, stating that we may have to change frequencies if the lower end of 220 MHz is taken away from us. There is apparently a problem with coaxial connectors in the receive and transmit antenna systems. The repeater committee will meet to discuss the problem and recommend solutions.

NEW BUSINESS

Treasurer Dick, KØJYB, informed us that we are spending 45% of our dues for the BSSS paper, and suggested that we either drop the BSSS subscriptions or increase our dues by 5 dollars to cover the cost of the paper. A discussion was held and Charlie (Happy Face), KA9UUK, told us that we would not be able to act on such a matter until December according to the Constitution.

Bill, K9EGQ, introduced Ray Snider, W9MNG, formerly of La Crosse, now living in Arizona and Washington State.

Spouses and Hams are invited to attend a get together next Sunday night, July 12, at 6 p.m. at the New Villa. Meals, etc.,

will be at your own expense.

Tim, NS9E, advised us that the ARRL is looking for film for a Ham Radio production. TV CH 8 has a professional format tape from Field Day, which we may be able to purchase and forward to ARRL. Rick, KV9U, moved that we pay \$25 or less for the tape. Motion seconded by Duane, W9HWQ.

The meeting was brought to a close at 8:30 p.m.

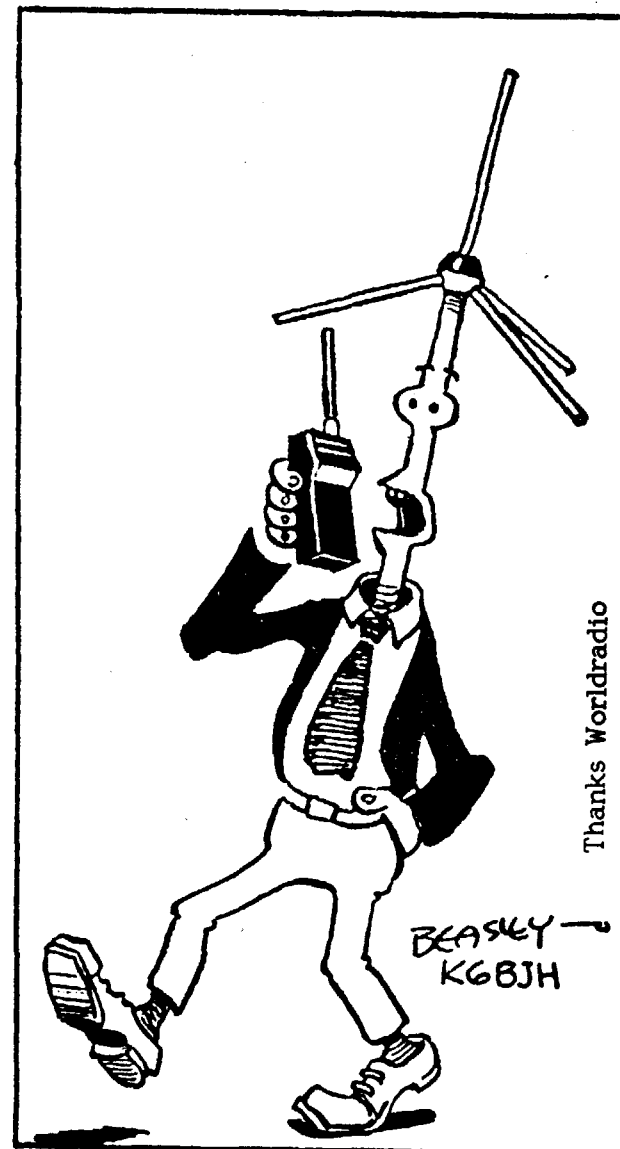
Respectfully submitted:

Dick Low, KØJYB

MEMBERS PRESENT

Wid Johnson	W9DM
Maty Johnson	XYL
Charlie Burch	KA9UUK
Betty Everson	YL
Ernie Gershon	K9ZVU
Jim Burcum	K9LBX
Dick Kleppe (Guest)	KØKTP
Ron Reed	KD9OY
Craig Goldbeck	N9ETD
Walt Altus	WD9GCR
Tim Stoffel	NS9E
Bill Winder	K9EGQ
Herman Ludvik	W9HJV
John Young	W9KAZ
Jack Yoshizumi	W9KTD
Jim Molledahl	W9BI
Bill Wood	WB9VYI
Ralph Jahimiak	WA9OAE
Dallas Miller	K9LEC
Rick Williams	KV9U
Glen Whitlock	NØBBW
Art Osborn	WØJDC
Ray Snider (Guest)	W9MNG
Bruce Bjerstedt	K9CUT
George Kroner	KA9HOP/KT
Duane Fruechte	W9HWQ
Van Elston	WA9FIO
Gary Webb	N19V
Dick Low	KØJYB

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appreciated!



I READ SOMEWHERE THAT TOO
MUCH OPERATING ON A RUBBER
DUCKY MIGHT HAVE AN ADVERSE
EFFECT ON YOUR HEAD --- ISN'T
THAT RIDICULOUS?

CONGRATS!

Badger State Smoke Signals congratulates Bill McCullough, W9CWM, Wisconsin Dells, on passing the Amateur Extra Class CW and theory examinations at Stevens Point recently - on the first try! (Thanks KF9I)

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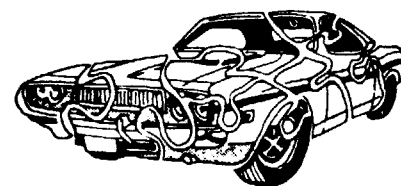
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Guest Editorial

SOMETHING TO THINK ABOUT

By George Hinds, N8CIX

Riding along over the road and listening to Amateurs conversing, from time to time I wonder what it is that gives some people the power to hold my attention, to make me actually happy to listen to them -- and, on the other hand, what is it with some Amateurs that causes me to reach for the "off" switch, or change frequencies?

I usually enjoy talking to people. I certainly enjoy talking to people who are joyful, who mostly have a positive outlook, who express optimism, who are "up" rather than "down." What is it about some people that, when entering a room or a conversation, other folks nearby "perk up" and actually feel better right away? Why are they so easy to talk to, to feel comfortable with?

Then along comes a "downer" -- from the beginning, their words have a negative tone. They complain (and mean it) of how rotten things are, of how someone hates them or they hate someone; they whine and moan.

When I listen to the "downers" I just know that they have never listened to themselves. When face to face, their expression conveys negativism; over the airways, their voice does precisely that, too. I wonder: When "on-the-air" do they realize that they are setting the stage for others to reject them, sight unseen? These are the people who say "no" frequently; often they complain that no one wants to be with them; always they are "fatalistic" and never "optimistic." If placed in a position of being a leader, they soon turn away their followers; not only are they "downers" but often prove to be abrasive in their relations with those upon whom they must depend.

Isn't it strange how unaware we humans (and especially we "communicators") are of what our face and our voice conveys to those about us? It's not alone what we say, but how we say it! Be an "upper" in your attitude and conversations and you'll create an atmosphere that will lead to being accepted rather than rejected.

Do you wonder what your voice conveys about you? Are others tuning you out or turning you off? Strong deodorant won't solve your problem. A change of outlook and attitude will. A hint. Listen critically to yourself in conversation with others. Have someone turn on a recorder and monitor a few of your conversations, then play it back for you later. What you learn about your on-the-air "image" may surprise and enlighten you.

No one can be expected to be a ray of sunshine every day -- just resolve not to be a cloud hanging over all you come in contact with. Don't close people out of your life; do bring them in to share it with you and, in doing so, you'll learn to be positive

about each day as you confront it. Wear a smile in your voice as well as on your face. Give happiness to those you talk to; you'll get it back in return while the number of contacts made on that rig of yours will likely pick up noticeably, too!

I believe happiness is something we acquire; we are not born destined to be happy or unhappy. It's probably not too late; if what I've said here has given you an insight on your attitude toward others, then go to work at being a happy person and let your voice reflect that happiness when you're "on-the-air." After all, you've nothing to lose, everything to gain.

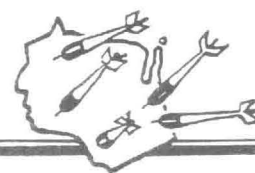
(From the newsletter of the Lake Erie
Amateur Radio Association via Dan
Schobert, W9MFG, Plover WI)

ANSWERS TO JULY TRIVIA QUIZ

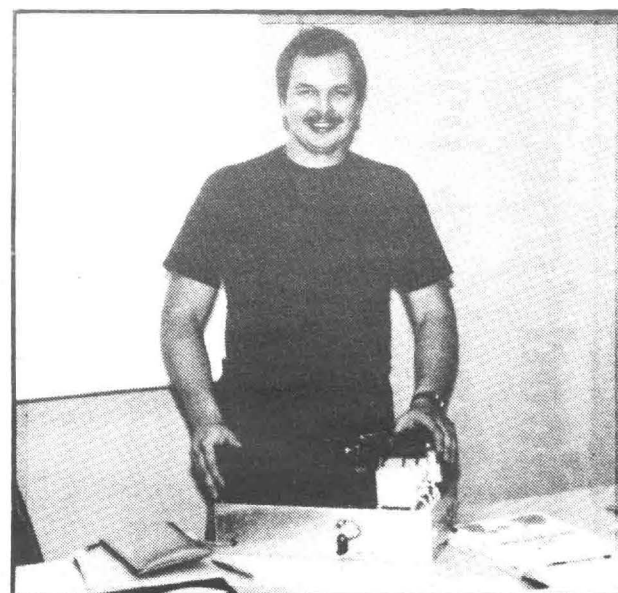
1. Continuous tone-coded squelch system
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9. W9OAK - Gary Maples
10. 457

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WANTED: SSB CB radio for conversion to 10 meters. Must be in reasonable working order, must be easily convertible, and must be cheap! K9ZZ. (608) 356-4249.



HERE and THERE



Bob Scrip, WD9ANY, won the West Allis Radio Amateur Club's "Project Night Contest," held at the club's June 9, 1987 meeting. Bob's winning project was a state of the art solid-state heavy duty 12-volt power supply.

-- Photo by Les Peterson, W9YCV

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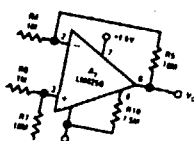
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John's



Junk Box



By John W. Frank, WB9TQG
P. O. Box 5113
Madison WI 53705

DEALING WITH FIELD DECAY TRANSIENTS

PART 2:

HOW TO SUPPRESS FIELD DECAY TRANSIENTS

Last month I described the nature and origin of field decay transients. The two most important things to remember about these transients are that they can have a voltage considerably higher than the applied voltage, and that the polarity of the transient is the opposite of the applied voltage.

The three most common methods of suppressing field decay transients are: simple resistor-capacitor networks, metal oxide varistors (MOVs), and Silicon diodes.

Suppose, for example, you have a solenoid connected as shown in figure 1. When the pushbutton is pressed, current flows through the coil and the plunger is pulled in, thereby accomplishing some mechanical task. When the pushbutton is released, the transient produced in the coil can cause arcing or pitting on the pushbutton contacts. Adding two components, a resistor and a capacitor, as shown in figure 2, can suppress the transients. A small amount of resistance in series with a capacitor can provide protection because the transient produced when the solenoid is deenergized is "absorbed" by the capacitor. The capaci-

tor then discharges through the series circuit formed by the resistor and the coil. Typical resistor values would be in the range of 100 to 300 Ohms. Typical capacitors for this application would be .02 to .10 microfarads.

Transistors being used as relay drivers can sometimes be damaged by field decay transients from relay coils. I have seen two different approaches to this problem. One involves protecting the transistor through the use of metal oxide varistors as shown in figure 3. When choosing an MOV for this type of circuit, use one that will act like an open circuit for the normal collector-emitter voltage, but will shunt the field decay transient around the transistor.

Figure 4 shows a common method of protecting solid state relay drivers. The diode across the relay coil is reverse biased when the relay coil is energized. When the relay is deenergized by the removal of the supply voltage or the switching action of the transistor, the field decay transient forward biases the diode. The diode effectively short circuits the transients and the transistor is protected.

Integrated circuits being used as relay drivers can also be protected through the use of a diode across the relay coil as shown in figure 5.

Several years ago, I built a timer circuit using a 555 chip. I put a 1N914 Silicon diode across the relay coil to suppress transients. The circuit didn't last too long. A transient ruined the diode and it turned into an open circuit. This left the 555 timer chip unprotected and it shorted out. The shorted timer did not provide the delay needed before voltage could be applied to a power amplifier. The power amp turned on too soon and blew something else out. The moral of this story is that instead of using small switching diodes, I now use Silicon rectifiers (1N4003 or 1N4005) for transient protection.

73, and don't let field decay transients get the best of you.

- WB9TQG -

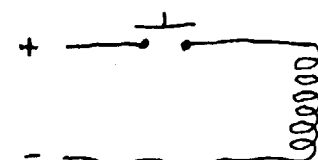


Figure 1

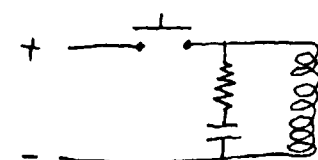


Figure 2

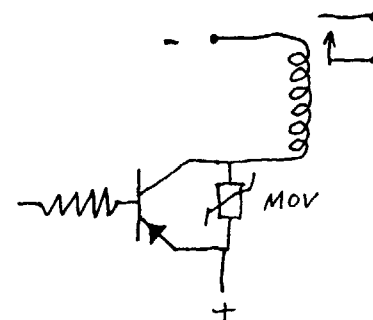


Figure 3
Relay Driver

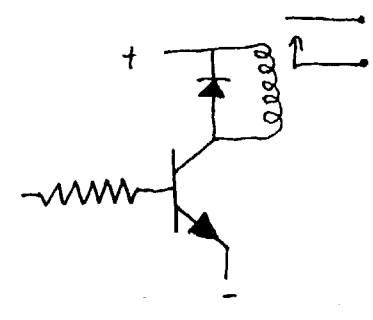


Figure 4
Relay Driver

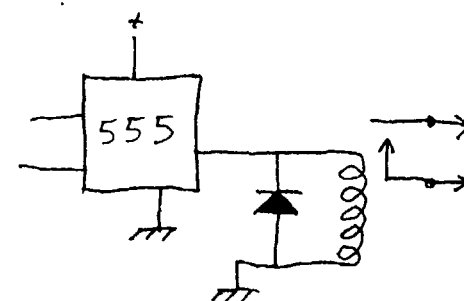


Figure 5

ARRL REQUESTS SPECIAL COMMEMORATIVE CALL SIGNS

The ARRL has requested the FCC to allow special commemorative call signs in celebration of the Bicentennial of the US Constitution.

Specifically, the proposal asks that amateurs operating in their traditional call sign districts be authorized to replace the numeral in their call sign with a two-digit numeral corresponding to the order of entry into the Union (or in the case of the 13 original states, the order of ratification of the Constitution) of the state from which the operation takes place.

For example, Connecticut was the fifth state to ratify the Constitution, so K1ZZ in Connecticut could sign K05ZZ. California was the 31st state to enter the Union, so KB6ZV would operate as KB31ZV.

Also, pre-registered Amateur Radio clubs could replace the numeral in their call with the numeral "200" for a designated one-week period corresponding closely to the date of entry of their state into the Union. For example, W1AW would become W200AW for one week in January.

The ARRL has requested FCC to allow use of Bicentennial call signs from September 17, 1987 through December 31, 1988. An FCC response is expected shortly.

(From The ARRL Letter, published by the American Radio Relay League)

Wisconsin was the 30th state admitted into the Union. Thus, call signs in Wisconsin would be like these, for example: K30EN, NG30V, KA30GNY, W30IEM, KB30FA, WA30CDY, WB30UQT, N30AGF, etc.

-- K30ZZ

DAYTON SCHOLARSHIPS

The Dayton Amateur Radio Association has announced the winners of the Association's 1987 \$1000 scholarships. Of the four winners, one is from Wisconsin: congratulations to Douglas Kleeman, KA9LWM, of Shawano.

These scholarships are open to any FCC licensed amateur graduating from high school in the year the awards are given. There is no restriction on the license class of the student or the course of study.

Information and applications for the program are available after January 1 from: DARA Scholarships, 317 Ernst Ave., Dayton, OH 45405.

(From The ARRL Letter)

Trekker Checkers



Here, left to right, are: Jim Decker, WB9UQT, EC/Sauk County; Gene Underwood, W7AKA; Gene's YF Fran, N7FWZ; Sharon Felten, WA7ZSQ; Jere Felten, W7TVA; Melissa Richmond, KA7YJF; and Randy Richmond, N7IEK.

Just under two hundred hardy souls took what could well be called the ultimate bicycle ride between June 1 and July 16, 1987, when they rode from Seattle, Washington to Atlantic City, New Jersey - that's a distance of 3,397 miles. The TransAmerica Bike Trek raised over \$1,000,000 for its sponsor, the American Lung Association.

Helping to hold it all together was Amateur Radio. Gene Underwood, W7AKA, oversaw the design and setup of the Ham Radio system for the Trek. Nine very dedicated Hams helped track the trekkers as the Hams rode in vans which were outfitted with support items for the bikers. The Hams riding along to support the Trek were Dave Shaw, N7JJD; Gene Underwood, W7AKA; Gene's wife Fran (N7FWZ); Jere Felten, W7TVA; Sharon Felten, WA7ZSQ; Randy Richmond, N7IEK; Tom Standeart, N7IEJ; Melissa Richmond, KA7YJF; and Diane Malone, KB7BAY.

The Trek took the bikers through Wisconsin, and, when they stopped over night in Baraboo, your editor showed up with a camera, resulting in the photos you see here.

Your editor found a learning situation here: You do not smoke a cigarette around 200 bikers earning money for the American Lung Association.

220 MHz UPDATE

(Continued from front page)

all of the significant comments to be able to reply.

The ARRL also had difficulty with the disorganized comment volumes at FCC, and a footnote was inserted in our reply comments reserving our right to file supplemental reply comments should we discover any other arguments filed against us.

On June 19, ARRL filed over 45 pages of reply comments in General Docket 87-14. These reply comments are in response to the comments filed, both pro and con, to the Commission in this proposal.

The ARRL reply comments, in noting the thousands of comments filed by the Amateur Radio community, said: "The Amateur Radio Service has established, by its thousands of comments in this proceeding, a unified expression of righteous indignation at the proposed deprivation of two megahertz of critical support spectrum at 220-222 MHz.... The Comments of the Amateur community establish, without exception, that the Commission's proposal to take 40 percent of the 220-222 (sic) MHz band from Amateurs is based on an absolutely incorrect premise -- that the 220-222 MHz segment is "not significantly used" by Amateurs. These Amateur comments are highly critical of the Commission's reference to the League's Repeater Directory as a basis for that premise, and rightly so; the Directory was never intended to be a listing of other than repeat-

ers.... It contains essentially no information concerning non-repeater uses in the 220-225 MHz band."

The ARRL also noted that the FCC received very few comments from individual land mobile users and said this reflected the lack of interest by the service due to the small amount of spectrum space in the proposal (most of the original Land Mobile Service in this docket wanted the 4 megahertz between 216-220 MHz). A number of comments were even received from land mobile users which suggested that Amateur frequency allocations not be disturbed and recommended that the 216-220 MHz region be used instead.

The serious adverse impact on Amateur emergency communications was addressed by the American Red Cross and many state and municipal emergency preparedness agencies. The American Red Cross stated that the "proposed reallocation stands to harm the development of packet radio technology and the development of regional high-speed data links in the 220-222 MHz band. The emergency communications capability of this new, efficient technology is beyond that heretofore possible."

In its conclusion, the ARRL urged the FCC not to adopt the proposal, but to continue the Amateur 220-MHz band allocation in its entirety.

(From The ARRL Letter, published by the American Radio Relay League, 225 Main Street, Newington CT 06111)



Here are Gene (W7AKA) and Fran (N7FWZ) Underwood with Harv (K9YHO) and Dorothy Hamer, of West Baraboo. Harv served as Base Support Operator for the Trekkers, keeping them in touch with the outside world during their stretch from Sparta to Baraboo.

PLEASE!! If you submit photos to BSSS for publication, submit good quality ones! Photos taken with disc or 110 film cameras, especially color ones, are grainy and not sharp. After being halftoned to an 85 line screen and published in black and white, they usually look pretty awful. If you care enough to send us photos, please make them good ones: black and white, if possible, taken with a 35mm or larger film camera. -- K9ZZ

Persistent Oldtimer

James Douglas, W9DR: Hamming Seventy Eight Years

By Richard R. Regent, K9GDF
5003 South 26th Street, Milwaukee WI 53221

It is the early days of wireless, the year, 1909. Eight-year-old James Douglas busily winds a 22-inch long coil on a 13-inch diameter form with bell wire, positions two sliders and connects a galena crystal to make a 200meter receiver. Next, he wires a homemade code key to a Ford spark coil for a transmitter. Then, he adds an antenna and sits down at the controls to operate.

"My father, a Ham in 1909, had an antenna on the roof and a homemade receiver and spark transmitter in our home at 677 Jackson Street in Milwaukee. Dad communicated with others using the letters 'BD', which were his initials. He taught me the code and theory and I operated using my initials 'JD'."

Jim now admits, "There weren't many stations to talk to when I started, mostly experimenters around town; fortunately, equipment was easy to operate. I still have that first receiver. We used 200 meters to keep from interfering with ships on 600 meters. They had an antenna on a high building at the southwest corner of Broadway and Wisconsin for Lake Michigan mariners, and used the call WME. That building is still there but the antenna is gone.

"While I was in the Boy Scouts, I put a metal spike on one shoe for a ground and held an antenna above my head to operate portable and tried to find other Scouts with wireless setups. My equipment, including a crystal detector receiver with earphones and drycell powered transmitter, was packed in a wooden grape basket.

"Licenses with call letters were not common until 1912 when I got mine, 9ALT. Around 1916, I got a 3/4 Kilowatt transformer to build a transmitter with a bigger spark. We were just having fun, then along came World War I. It broke things up a bit. Licenses were cancelled. We were required to dismantle our sets and take down antennas." Jim lost the call 9ALT but then obtained 9DO after the war.

While attending the University of Wisconsin - Madison in 1920, Jim helped build WHA, the Voice of Wisconsin, from parts of an

experimental station, 9XM. "I assisted Professor Terry in pumping the air out of a glass bulb, we made our own transmitting tubes tubes in those days." (W9XM is now held by Ken Dixon, Verona, Chief Engineer of WHA-TV. -ed.)

Jim was great at building small things. Not to be outdone in the small motor building competition, he built a synchronous motor with a two-pole rotor on the shaft of a small piece of sewing needle. "It sounded like a mosquito and worked on about 1/3 volt at 60 cycles from a transformer I wound with various voltage taps. Five or six motors could fit in the size of a thimble." Spectators had to watch the tiny motor, running at 3600 RPM, through a magnifying glass because it was only 1/8 x 3/16 x 3/16 inches in size.

Jim was clever with mechanical ideas too. "My motorcycle couldn't cross rivers when I traveled in Canada during the rainy season. So I traded the cycle for a 1918 Model-T Ford, took the fenders off, waterproofed the bottom with a canvas and put on a rear propeller. An amazed crowd watched as I drove the car into Lake Mendota - and it floated! After an exhaust pipe modification, several more launches were made with up to five passengers each who would laugh as I tooted the car horn at boaters in passing canoes." This is perhaps the first amphibious Ford, invented in 1924. Jim graduated in 1925 in Electrical Engineering and also completed a smattering of business courses.

"We had to quit hamming again during World War II," Jim recalls.

Later, in 1947, Jim, then W9DR, was the Monday night Net Control Station for the Wisconsin Intrastate Net (a net that is active to this day). "I still enjoy memories of delivering messages from U.S. soldiers overseas to their folks in Wisconsin." Worried moms who didn't hear from their sons feared they could be missing, until Jim phoned with a message. "DEAR MOM X MY NEW ADDRESS IS....," Jim would read over the phone. Moms cried upon hearing the encouraging news from their sons that Jim delivered via Ham Radio. Skeptical Moms visited W9DR to understand the message system and to give their deepest thanks. Eventually, Jim convinced his own sons, Bill and Bruce, to get Ham licenses. "I handled many messages over the years and recall one particularly tiring day. With Hams out of town for an event in Wausau, it was up to me to handle messages. Suddenly, a flood ravaged near Denver where a group of Milwaukeeans were camping and the messages began pouring in to me. I kept at it and delivered a load of 42 welfare messages that day."

Jim is retired from the Oil Gear Company where he garnered 46 patents for his hydraulic inventions. "It was easier in those days to think of new ideas." Work took him to sea to perfect hydraulic catapults for airplanes, ship steering systems and gun mechanisms. "Once a Destroyer darted in front of the Tanker I was on. The tube of flashing light from the Destroyer signalled our crew." The story was revealed by knowing the Code. Jim laughs, "They simply wanted to know 'CAN YOU SPARE SOME FLOUR'."

Walking a brisk one-mile every day, bowling twice a week and seeing an occasional baseball game, Jim says, "I feel good at 85, am busy and happy." It's pretty obvious why the Men's Club Jim belongs to picked him as their Audio-Video Chairman. "The best change in Ham Radio was adding phone and SSB," professes Jim, although he prefers CW on 40 and 80 meters. What's in Jim's future after 78 years of Amateur Radio? "I'm still using tubetype equipment I built in the 40s, but tubes are hard to find and they've been giving me a bit of trouble. I might just buy something a little more modern and reliable."

A man was buying an airline ticket. He said to the clerk, "I want this suitcase to go to Atlanta, this one to Washington, this one to Houston, and this one to Chicago." The clerk replied, "We can't possibly do that." The man said, "I don't see why not; you did it the last time I travelled."

(From the Amateur Radio News Service Bulletin)

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356-7718



WISCONSIN CHAPTER 55

On a beautiful Wisconsin spring day, Saturday, June 6, 81 members and guests gathered at Fischer's Supper Club in Lake Delton, Wisconsin, for the Spring Dinner Meeting.

Many enjoyable "Eyeball QSOs" took place during the registration and attitude adjustment period.

At noon, following the Invocation by Harry Greuel, W9AHQ, the group feasted on a wonderful buffet style dinner. Following the dinner was the general meeting. During it, there were self introductions of members and guests, and a moment of silence for our most recent "Silent Keys:"

George Lindstrom, W9JSF
Lester Miller, W9OFL
George Jesse, W9IQW

After the moment of silence, the following certificate and plaque presentations were made.

Rich Regent, K9GDF, ARRL Wisconsin Section Manager and Chapter Treasurer was called upon by Chairman La Blonde, W9FZC, to make the presentations. The first went to our honored member, Jim Douglas, W9DR. Rich introduced Jim and his wife, Marion, and other members of his family who were helping to celebrate this special occasion. After a few comments on Jim's amateur radio career and some experiences, Rich presented him a QCWA Golden Anniversary Certificate with 55, 60, 65 and 70 year endorsements. He also presented Jim with an ARRL hard cover Handbook, a certificate of merit for his 70 years plus in amateur radio, and a large

stuffed fox as a memento of Jim's radio fox hunt while in the Boy Scouts.

Yuki Minaga, W9DU, was presented with QCWA Golden Anniversary and 50 Year Continuously Licensed certificates by Rich.

Recipients of plaques for 50 year continuous membership in the ARRL were Clayt, W9OVO and Les, W9YCV.

Chapter membership certificates were presented to:

Joe Ferris, K9AQX
Larry Staats, WA9CNA
Harry Greuel, W9AHQ
Robert Angsten, N9FZK

The following new members will receive theirs by mail:

Robert Montroy, WØKCT
John Christensen, W9TVA
Royal Tice, W9WUX
Theodore Lange, W9CFO
Dorothy Moore, K9BBL
Robert Gestner, K9YTS
Ivan Makovec, W9AFW
George Menart, K9GM
Thomas Korn, W9ZJZ
Marshal Dolgin, KB9G

Following these presentations, the ladies departed for games of Bingo or to go shopping, and the business meeting was called to order by Chairman La Blonde, W9FZC. Both the minutes of the previous meeting and the treasurer's report were approved as read. The secretary read letters received from El Charlton, W5MD, and Travis Baird, W9VQD, pertaining to their nominations as National Directors. An au-

ditioning committee consisting of Bill (W9FPA), Jack (W9JK), and Vic (W9TQ) was named by the chairman. He also selected Travis (W9VQD) as nominating committee chairman, and George (W9SUF) and Charlie (W9CUW) to assist in selecting candidates for Board members. The terms of Rich (K9GDF), Fergie (W9IEM), and Harv (K9YHO) are expiring in October.

Under old business, the "no dues" proposal for certain older members made by Rich was held over awaiting further word from National.

For new business, Port Washington was suggested as the site for the June '88 meeting. Also, Fergie suggested that Net Controls for the Sunday morning chapter net complete the check in rotation before calling upon the short timers for their comments. It was also suggested that the chairman and secretary be permitted to make their announcements.

In the board meeting, the matter of lost members due to delinquent dues in National and chapter was discussed and a course of action was adopted.

After adjournment of the business meeting, Travis auctioned off the "junk box goodies" members had brought for the benefit of the treasury.

REMINDER

The Fall '87 annual meeting will be at the Liberty Club in Kimberly, WI, on Saturday, October 3rd.

Lester A. Peterson, W9YCV
Chapter Secretary
9741 West Howard Avenue
Greenfield, WI 53228



W9DR HONORED

Jim Douglas, W9DR, (standing, left), receives QCWA Golden Anniversary Certificate with 55, 60, 65 and 70 year endorsements for his 70 years plus in Amateur Radio from Rich Regent, K9GDF (standing, right), Wisconsin QCWA Chapter 55 treasurer and ARRL Section Manager for Wisconsin. Seated left is Harry Greuel, W9AHQ; seated right is John La Blonde, W9FZC, Chairman. See W9DR story on opposite page.

Photo by
Les Peterson, W9YCV

Identify yourself with our custom engraved call pins

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We now have the Wisconsin state outline

FALLERT'S ENGRAVING
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WB9YSD TIES THE KNOT!

Congratulations to Steve Polishinski, WB9YSD, and Barb Zimdars, who were married in Madison on July 18!

Among those attending the wedding and/or the reception were these Radio Amateurs: WB9YSD (of course!), Carl Plotz, WB9JSW, and his wife Marvis, of Oshkosh; Gary Muskat, N9DRA, Middleton; Chris Zenchenko, WB9RSQ, Madison; and your editor, K9ZZ. Entertainment at the reception was by Clyde Downing, W9HSY.

Steve and Barb are making their home in Sun Prairie. We wish them many years of good health and happiness!

DOES YOUR BUSINESS SELL TO
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Smoke Signals!** Write Ken Ebner,
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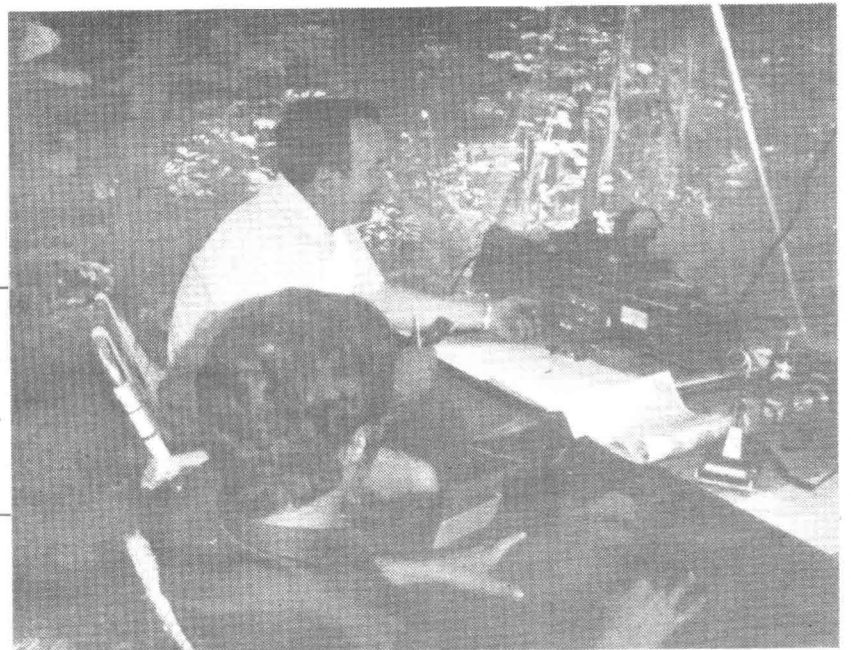
Field Day 1987

Photos from Mike Schoenfuss, N9GHZ

Taylor County Area Amateur Radio Club
Chequamegon Waters Chippewa
Campgrounds,
Chequamegon National Forest



Marc, WA9ZCO, adjusts one of the rigs.



Ernie, WD9FWP, tunes across the band looking for signals while Bernie, KA9WDX, looks on.



Lee, N9FZD and Bernie, KA9WDX, take a break from operating to discuss some of their contacts.



Rollie, W9LEE, supervises the Field Day activities! (What kind of a vehicle is that.. a "honey" what?)



At left is Jack McLeland, W9ATK, Glendale, a veteran of many, many public service activities. Jack has done yeoman service over a lot of years, not only aboard the circus train, but for hundreds of other events. (Jack, that was my box lunch you picked up that caused you to spill your spare parts.. sorry about that!)

Shown below, left to right, are Great Circus Train Ham operators Kate Kedney, KA9MWT, Milwaukee; Lloyd Gorsiski, WB9RGU, Racine; and Rick Johnson, KA9VZD, Antioch, Illinois. This photo was taken as the train passed through Devils Lake Park, just south of Baraboo. All operators for the train are selected by the Milwaukee County Amateur Radio Emergency Service. Not shown is chase van driver Ron Armstrong, WB9WRW.



Field Day 1987

Yellow Thunder Amateur Radio Club - WB9FDZ/9 - Owen Park (Columbia County) Wisconsin



Steve Schwoegler, WB9RNL, YTARC President, watches as Fred Becker, W9 King Kong Monster, Wisconsin Dells, works 15 meter SSB. The club's mascots, in the background, are urging Fred to keep "mooooooving" along with more contacts.

Ken Ebnetter, K9EN, of Portage, runs his Televideo computer and PK-232 to make Packet Radio contacts from WB9FDZ/9.



Bill Klinkner, center, mounts an antenna rotor on a mast for the 2-meter SSB station, with supervision from WB9RNL at left. Meanwhile, Duane Grotophorst, KA9HKL, untangles some unruly rotor cable.

Duane, KA9HKL, mans the 2-meter SSB rig. He recently passed his Amateur Extra.



A DAY IN THE FIELD

Besides the lack of mosquitoes and rain, ARRL Field Day 1987 brought pleasant surprises for many Wisconsin amateurs.

The winning strategy was simply to maximize the number of contacts and bonus points. The Packet Radio station, like the Novice station, did not add to the number of entry class transmitters, so there was no need to shut down a main station from operating while the Novice or Packet stations were on the air making contacts or collecting bonus points. Packeteers were able to relay ten bonus messages, send their message origination, and make a contact, for 300 bonus points, and then continue to make QSO points. The sparkling weather, Novice rally, and Packet capability gave many club scores a big boost this year.

By the time Field Day started, many clubs had already copied the special ARRL FD bulletin to capture the WIAW message bonus. Only 12 minutes after Field Day started, the W/K Club, located in a Saint Francis field, exchanged their bonus satellite QSO data. Meanwhile, the West Allis Radio Amateur Club, operating at the abandoned Highway 100 Outdoor Theatre grounds, put on a good show. Some WARAC members joked about seeing slides of last year's Field Day on the big screen later when it would get dark. We'll never know; we didn't stay.

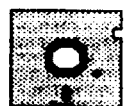
Bicycle or sunshine natural power was used by a few clubs to make 5 two-meter QSOs for another bonus. Club officials around Wisconsin greeted visitors, explained the Field Day purpose and gave tours of operating stations. Local newspaper reporters stopped by to snap a picture and write up a story, helping the clubs get their public relations bonus points.

From Porta Potties to extension cords, and many of the conveniences of home, Wisconsin Amateurs were roughing it in the Field. Occasionally, a few words were heard from club tents as 100% emergency power generators sputtered, keyer memories were lost, and lights dimmed. Thanks to all who participated in Field Day 1987.

The following message originations reached their destination of SM:

ARC of CW, N9BBN
Beloit ARC, K9EP
Calumet ARES, KN9P
Central Wisconsin RA, W9NN
Eau Claire ARC, KC9NN
Flambeau ARC, KG9J
Four Lakes ARC, N9ADN
Green Bay Mike and Key Club, K9EAM
Madison ARA, KB9NG
Northwoods Ham Club, KA9BHL
Riverland ARC, NS9E
River Rats FD Group, KB9S
Shawano RC, NO9K
Tri County ARC, W9MQB
Washington County ARC, W9SIZ
West Allis RAC, W9FK
Wisconsin Rapids ARC, K9UTQ
W/K ARC, N9AW
Individuals: N9BDL, NI9E, W9IBL, N9HR

-- Richard R. Regent K9GDF
Section Manager



RHINELANDER SWAPFEST AUGUST 15, 1987



SPONSORED BY NORTHWOODS AMATEUR
RADIO CLUB & ARES

Open 8AM for set up - 9AM for sales.

Ticket required for admittance.
6 for \$5.00

Tickets \$1.00 each or

prize - ZENITH VHS 4 HEAD VCR

No charge for tables on first come first served basis.



Talk in on 146.34/94 repeater.

You may set up in the parking lot
using our tailgate flea market
(no tables furnished for flea market)

At this swapfest you never have to bring anything home.
At 1 PM you can sell what you have left at our auction. You
may donate items to the club or we will sell them for you with
10% of sale going to club. Greg Garner KA9VII Auctioneer.



Food and beverage available
during swapfest



Dealers welcome: For information contact Leonard Bauman K9RMN
1312 Dorothy St. Rhinelander WI 54501 or phone 715-369-3296

So come and join the fun.



SOUTH PARK SCHOOL
511 SOUTH PELHAM STREET
RHINELANDER, WISCONSIN



SCIENCE - HAMS - EDUCATION

How would you like to spend some time using packet radio in a 4th or 5th grade classroom? You would not only demonstrate amateur radio, but actually be part of science education in your school.

I, along with the Wisconsin Academy of Science, Arts and Letters, am working on a proposal with the National Science Foundation to join amateur operators and a 4th or 5th grade teacher. The plan is to have a demonstration project of 15 or 20 schools throughout the state to start. Because of the amateur setup and the education setup all over the U.S., this may be able to expand at a later date.

The teachers would conduct problem-solving activities in their science classes, then once every few weeks, an amateur would come into the class and

the data collected would be shared via packet radio with other schools, either by leaving the data on a BBS, or by direct packet connect. It might be possible to even have some equipment in place at the schools through this grant.

Right now, what I am interested in is finding out if the amateurs would be interested in such a project. If you want more amateurs, this is a great way to introduce young people to the hobby we enjoy.

If you are interested in this project, please contact me. It is still a way from starting up, but, to write a proposal, I need to show interest from the amateur community, and how much interest there is. Packeteers, here's your chance.

Al Hovey, WA9BZW
314 Fairview Way
Shawano, WI 54166

PROPAGATION PREDICTIONS



BY *Woody Minar* K9EF
13508 Tabscott Drive, Chantilly, Va. 22021

According to the Space Environment Services Center (SESC) at the NOAA, the sunspot maximum for Cycle 21 occurred in December, 1979, with a final sunspot number of 165. The sunspot minimum may have occurred in September 1986! The following chart adds credibility to their theory:

	Month	Sunspot Number	Radio Flux	Ap
1986	April	21	75	8
	May	15	73	12
	June	1	68	8
	July	19	70	8
	August	9	68	12
	September	4	69	17
	October	40	83	11
	November	17	77	13
	December	6	73	8
1987	January	12	72	8
	February	5	71	10
	March	21	74	10
	April	53	85	7
	May	40	88	14
	June	35*	80*	11*

* Estimated

The estimated sunspot peak for Cycle 22 is expected from 1990 to 1991, with a value of 120.

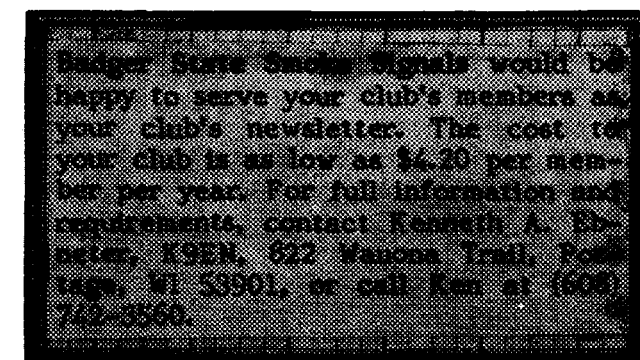
More information is available if you want Zurich and International numbers: Daily (1818 to present), monthly and smoothed monthly (1749 to present), and yearly (1700 to present). They are available in publication report UAG-95, 112 pages for \$10.00; diskettes (2) for \$60.00; and yearly subscription to the Solar Indices Bulletin for \$20.00. Write to the National Geophysical Data Center (World Data Center A for Solar Terrestrial Physics), NOAA E/GC2, 325 Broadway, Boulder, CO 80303, or by telephone (303) 497-6136 or 6475.

Better than average propagation should occur August 1-2, 14-16, 28-30, September 11-13 and 25-27.

The days to avoid are August 7-9, 21-23, September 4-6 and 18-20.

Have a safe Labor Day weekend.

73, Woody



Badger State Smoke Signals is produced by Amateurs for Amateurs. It is all volunteer and completely non-profit.

Eau Claire A.R.C.

NEXT MEETING

The next meeting of the Eau Claire Amateur Radio Club will be Tuesday, August 11, at the Eau Claire Parks and Rec. building at 7:30 p.m. Lunch Committee: Phil KA9LJK, John KA9VUE, and Ron KE9BM.

JULY MEETING SUMMARY

The meeting was called to order at 7:30 p.m. The minutes were approved as published in the Badger State Smoke Signals. In the interest of saving time for the program, the minutes were read in abbreviated form. The treasurer's report was approved as read.

OLD BUSINESS

John KA9RZL reported that there were 43 contacts during the operation of the special events station at the Altoona Centennial. Eight QSL cards have been received thus far. Operators included Phil KA9LJK, Fred KC9NN, Chuck KA9GTF, John KA9VUE, Andy KA9HWN, and Lane KD9OB.

KC9NN summed up Field Day operations in a word - "enjoyable." The station was excellent from a technical standpoint and operators enjoyed all the comforts of home while roughing it in Mt. Simon Park. Both TV stations stopped by. LJK is still duping - watch QST for scores.

LJK gave a brief preliminary report on the Hamfest. Attendance was 350 and 449 tickets were sold. Profits are expected to be about \$360. Dan KA0ZYF was present at the club meeting (along with a number of folks from the Rochester ARC) and picked up the Icom OT he won in the prize drawing at the Hamfest. Carl W9NW reported on the VEC exams given in conjunction with the Hamfest. Special congrats to John KA9RZL who upgraded to Amateur Extra. Special thanks were expressed to all who helped make the food concession a great success again this year.

Andy KA9HWN reported for the trailer committee. The committee has done no further pricing of trailers for emergency communications use. \$15.65 in donations for a trailer was collected at the Hamfest.

LJK reported that no reservations have been made for the club picnic and indicated that our best hope for a good spot at this late date was to acquire one at Irvine Park or Riverview Park by squatters rights. A motion passed in favor of Riverview Park as the site. Saturday August 15 was set as the preferred date by consensus with 10 a.m. as the starting time and 1 p.m. meal time. KA9VUE will stake a claim early in the morning and

would probably appreciate the company of other early birds. As in the past, the club will provide ice cream and pop and members should bring their own utensils and a dish to pass. Joe KB9R, John KA9VUE and Ron KE9BM will serve as a picnic committee to work out any further details. W9NW reminded us that the Menomonie Club is also participating. A motion was passed that an invitation to the picnic be extended to any interested Hams - publication of these minutes in BSSS to serve as notice of this invitation. Talk in will be on 146.52. At this point representatives of the Rochester ARC urged one and all to attend their picnic on Aug. 18 at 7 p.m. at Silver Lake Park in Rochester MN. Talk in on 146.22/82.

NEW BUSINESS

Phil KA9LJK is once again Eau Claire County EC - assisted by John KA9RZL. Forms for registering stations with ARES were passed out by RZL.

A problem finding a storage place for the emergency generator was quickly solved when VUE offered space.

Robin NI9R reported that the Rehab Radio project is (euphemistically speaking) "entering a new phase." The present core group of volunteers is "burning out" and long term commitments to a strict schedule are no longer possible. Operations will continue, however, on an ad lib basis when volunteer operators are available. Contact NI9R if you would like to participate in one of these sessions.

The business meeting was adjourned at 8:10 p.m. After a break for lunch, Rob K0XL and John K0KTY presented an impressive program on fast scan TV including a live telecast and a tape of mobile operations in a helicopter and a hot air balloon.

Respectfully submitted:

Robin NI9R -- Sec. EARC

— MAY FCC LICENSING FIGURES —

The May FCC licensing figures contain some good news for amateurs who have been concerned about the Gettysburg backlog and about amateur growth. For awhile this spring, some applicants for new licenses were waiting as much as 12 weeks for their licenses. The ARRL raised this issue with the FCC, and we were promised that some additional personnel would be assigned to process amateur applications.

The May FCC statistics are now in, and they show that the FCC processed 18,889 applications, which includes 6,797 new amateurs. This brings the five-month total for 1987 to 14,679 new amateurs. The comparable figure for the same five months last year was 8,613, so new amateur licensing so far this year is running 70% ahead of 1986.

ARRL HQ has also heard from several Novice instructors, who tell us that their students are now receiving their licenses in as little as four weeks.

Here are the license totals as of the end of May:

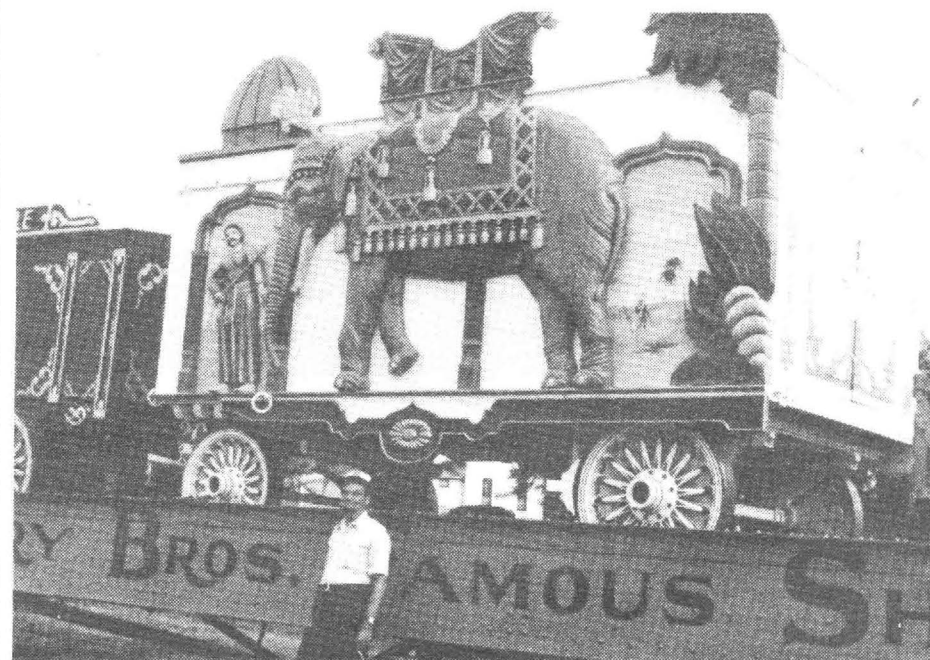
Novice	86,175
Technician	87,631
General	115,045
Advanced	97,880
Extra	42,136
TOTAL	428,867

The total is up 2.8% from one year ago.
(From The ARRL Letter)

NEW ARRL MEMBERSHIP SERVICE

Commencing with the August ARRL membership expiration notices, members are now being reminded of their FCC license expiration date. Amateur licenses are renewed by filing FCC Form 610 which is available from HQ for an SASE. Remember, there is no fee charged to renew an Amateur license. (From The ARRL Letter)

Many Talents, Indeed!



Bob King, KA9GNY, Baraboo, shown here standing by a circus wagon, is indeed a man of many talents.. He is a retired telegrapher; he is a Ham Radio operator, but he has another skill having nothing to do with communications: He restored much of this circus wagon, including the elephant carvings on both sides. He says he spent about 640 hours on the elephant carving restoration alone. The wagon can be seen (along with many others) at Circus World Museum in Baraboo.

OUR UNSUNG HEROES: Badger State Smoke Signals thanks two kind folk whose efforts help us get this paper out every month: Don Evenson, K9JYX, and Keith

Kluge, both of Baraboo. Their volunteer help is very much appreciated by the harried BSSS staff! Thanks, guys; your help makes our jobs much, much easier. -- K9ZZ

Wisconsin Nets Association Ltd.

WISCONSIN NETS

NET	WNA	FREQ	UTC	CDT	MANAGER
BWN	YES	3984	1100Z	0600	WD9IID
BEN	YES	3985	1700Z	1200	KA9RII
WSBN	YES	3985	2230Z	1730	WB9ESM
WNN	YES	3723	2300Z	1800	N9DGL
WSSN	YES	3645	2330Z	1830	N9BDL
WIN-E	YES	3662	0000Z	1900	WB9ICH
WIN-L	YES	3662	0300Z	2200	KC9CJ
NWTN	YES	34/94	2330Z	1830	W9ZZM
WCWTN	YES	31/91	2330Z	1830	NK9L
GR.BAY	NO	72/12	0145Z	2045	WB9NRK
			THU.	WED.	

RACES NO 3993.5 1715Z 1215 WC9AAG
USB TUE. & THUR.
RACES NO 3993.5 1300Z 0800 WA9OAY
LSB SUN.

Section Manager's notes

Richard R. Regent, K9GDF
5003 South 26th Street
Milwaukee WI 53221

The Wisconsin Nets Association will hold its Annual Picnic on September 12th at Shawano County Park (near County HHH, 4 miles north of Highway 29 at Shawano Lake's north shore), with camping, swimming and boating facilities. The picnic festivities are at noon and meeting at 1:00 p.m. with door prizes, refreshments, mini-swapfest and awards later. Bring a friend or your entire family and a few junkbox items to trade. You don't have to be a traffic handler or member, everyone is welcome at the WNA Picnic.

September 17th begins the U.S. Constitution 200 year celebration, watch for news of the "We the People" Worked All States award.

September 20th, Tri-County ARC Fall Fest in Janesville at the Blackhawk Tech parking lot, N9TD for details.

Wisconsin Rapids exams September 26th, contact K9UTQ in advance.

Sorry to report Silent Key KW9H.

New BBS on KU9L repeater 443.675 MHz.

W9CXY will be active again after taking summer off to relax.

The Greater Milwaukee DX Association saves postage by having KS9K combining and mailing member's outgoing QSL cards to ARRL.

Thanks to James Romelfanger, K9ZZ, ARRL Public Information Officer for Wisconsin, for his excellent volunteer work in writing and editing the Badger State Smoke Signals, an up-to-the-minute newsletter in newspaper format, packed with Wisconsin Amateur Radio news, special features, photos and fun. If you would like to get a copy of the BSSS, please write to Jim at 412-1/2 Ash Street, Baraboo, WI 53913.

9RN CYCLE 4 REPORT JUNE 1987 QNI 348 QTC 398 QTR 860 IN 60 SESSIONS WISCONSIN PARTICIPATION SEVENTY FIVE PERCENT STATIONS W9CBE KC9CJ W9DND WB9ICH K9UTQ AND W9YCV 73 - W9JUI NM.

CAND REPORT FOR JUNE 87 580 MESSAGES IN 30 SESSIONS X 9RN REPRESENTED 100 PERCENT X WISCONSIN STATIONS N9EAX W9IEM W9ODV N9BGE KA9RII X 73 - W5KLV NM.

WISCONSIN INTRASTATE NET - EARLY (WIN/E)

Larry Guthu, WB9ICH
Net Manager
706 West Jennings
New London WI 54961

Hello, fellow WINners. I hope that all of you are having a nice summer. I don't know where the time goes; it doesn't seem like three months have passed since I last wrote a few lines.

It was nice to see a few of you at Stevens Point for the swapfest and meeting. Despite the really rotten weather we had, we managed to accomplish a bit of business, which was great, and we finished in time for the big prize drawing. Enough of this for a while; on to other things.

So far for this 2nd quarter, things are looking a bit slim, even though the amount of traffic is up, along with the nets running a bit longer. Our check-in totals are way down from the same time last year. I know one thing, and that is we have lost a few people along the way. They just dropped off and haven't been back. And, of course, there are those who are gone during the summer, but I would like to see more people down on 3662 because with checkins down and traffic up, that means that the load is falling on the same people and they need a bit of a break too.

I know it sounds like a broken record after while, but we need your support if we are going to keep moving on. We have a net control spot open on Friday nites, and we definitely need people to go to the 9RN on Thursday, Friday, Saturday, and Sunday nights. It's not hard to do, and it's only once a week - just four nights a month. I'm sure you can give just an hour a week. If anyone is interested, just let me know.

Here is the list of the top ten stations for this quarter:

1. N9BDL - 85
2. W9NGP - 74
3. W9CBE - 69
4. W9YCV - 64
5. WB9ICH - 48
6. K9GDF - 40 (tie)
6. KA9OBP - 40 (tie)
7. W9DND - 35
8. W9CXY - 34

As you can see, only 9 people qualified for the 30 out of 90 checkins, and, if you look back it is much the same people, so, how about you? Dust off the key and come join in at 7 p.m. on 3.662 and hear what you are missing.

Being Chairman of the WNA, I would like to write a few lines here and let you know that the WNA Picnic will be held on September 12th at Shawano County Park in Shawano, with things getting underway around 11 a.m. There will be games and prizes and possibly an auction. If any of you have equipment that you can't seem to get rid of, bring it along and donate it to us, and we'll

auction it off. Also, for those of you who want, you can bring your own equipment along and make up a mini-swapfest. You never know, you just may find something you want or you may have something that someone else is looking for.

So, until the picnic, have a safe and fun summer, and let's get the WINning spirit flying high.

Best 73, Larry, WB9ICH

GLASS ARM REPORT
(Wisconsin Slow Speed Net)

Lee G. Andreas, N9BDL
Net Manager
Route 1, 7600 Highway D East
Lake Tomahawk WI 54539

Are traffic nets dying? Will there soon be one less traffic net on the air here in Wisconsin? Will packet radio take the place of nets as we now know them as the means of relaying messages? For the answer to these and other burning issues, check into a Wisconsin traffic net. Keep checking into that net or nets as often as you can. Encourage other hams you know and the members of your ham club to do likewise. Work with recently licensed hams to get them interested in traffic handling. Assist Novice (and General) Class instructors by giving a session on nets, traffic, and the importance of them. If you do the above listed things, then the first three questions will be answered by you with a resounding NO.

Some amateurs would like to see nets disappear. There would be more frequency space available for ragchewing or contests or DX chasing or county hunting. But does the general public appreciate ragchewing, contests, DX chasing, or county hunting? Where is the public service in these activities? We enjoy those pursuits, but doesn't each of us have an obligation to engage in some sort of public relations? Nowhere on our ticket does it say that we must do any of these things. We can maintain an Amateur Radio Call Sign and our license without even owning or using a piece of radio equipment. What will happen if we forget about public service activities? How will municipal zoning laws affect those "ugly, tall, dangerous towers that spew out interference to television and other entertainment devices"? Why shouldn't the AM broadcasting industry be allowed to take part or all of the 160 meter band? After all, Ham Radio is just a hobby. Why shouldn't the bottom 2 Megahertz of the 220 MHz band be given to the Land Mobile service? Isn't communications from anyone's automobile more important than a handful of guys talking about GaAs FETs or Yagis?

Sure, Hams are mobilized and provide an important communication link whenever a disaster strikes. But how many people realize the importance of this service if they are not likely to be affected by the disaster? What will disaster communications be like if they are run by ragchewers and DX chasers when there are no more traffic handlers around? How about those people that never have the need for our expertise in emergency communications?

Let's face it. We need every shred and scrap of support from the non-Ham community that we can

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THE WISCONSIN PACKETEER

Wisconsin Amateur Packet Radio Association (WAPRA)
P.O. Box 436 Cedarburg, Wisconsin 53012-0436

W.A.P.R. Meeting Minutes - July 18, 1987

Minutes of the meeting of the Wisconsin Amateur Packet Radio Association held this date at the South Milwaukee ARC swapfest in Oak Creek. The meeting was called to order at 1:05 pm by Dan Bolander, WB9TYT, in the absence of the chairman and vice-chairman. Twenty three persons were present. Treasurer Roy Hawkins, WA9KEC, reported a balance of \$375 and that all outstanding bills are paid. The report was approved as read. The minutes of the regular meeting of March 21 were read and approved.

The first order of business was to hold the annual election of officers and board members. Nominations were opened for each of the four offices. In each case the incumbent was nominated, on motion and second nominations for each office was closed and on motion and second a unanimous ballot was cast for the single nominee for each office. As such, Chairman Gregg Lengling, WD9DHI, Vice-Chairman Jon Nondahl, WD9GWZ, Secretary Dave Knaus, WA9POV, and Treasurer Roy Hawkins, WA9KEC were each re-elected. Nominations were opened for the three positions of member of the board at-large. Nominated were John Ackermann - AG9V (inc), Carl Schumacher - N9BYS, Bob Scrip - WD9ANY, Rudy Hilsman - KB9OK and Les Peterson - W9YCV. On motion and second nominations were closed. A secret ballot was held resulting in tie votes between two pairs of nominees. A second secret ballot was held with AG9V, N9BYS and KB9OK being elected to the board.

It was asked whether the funds previously said to be available from the treasury of the Wisconsin Area Teleprinter Society, currently being dissolved, had been transferred to WAPRA yet. Ken Ebner - K9EN, reported that some final paperwork still needed to be completed and that the funds would be transferred soon.

Dan, WB9TYT, offered a brief explanation of the purpose of LANs, backbone frequencies and NetRom. Questions were asked and answered regarding the use of NetRom and the operation of backbone frequencies. Dan explained how the NetRom and UHF backbone frequency planned for Milwaukee to Green Bay would work.

The meeting adjourned at 1:49 pm.

Respectfully submitted,

Dave Knaus, WA9POV, Secretary

PBBS Revisions in Waupaca.....

This PBBS board will be undergoing some major changes in the near future.

1) I have just received the latest Version 3.13 of the WA7MBL PBBS from Wes Morris in Scottsdale, AZ. who handles distribution of the WORLI boards and some others.

2) This new software will be replacing the software currently running this system.

3) The new board is compatible with all WORLI type boards and follows the same command

structure and features as other WORLI type boards such as AG9V in Green Bay.

4) The new software will be running on a Commodore PC-10-2 with dual 360k drives to start. A hard drive or hardcard of 30 megabytes will be added in the near future.

5) The new software supports all the features found on the other major boards including some new features.

I will advise as system status changes here.

Bob N9BKJ - sysop

WB9TYT-9 (alias SLG) 145.09 NetRom Upgrade

Dan - WB9TYT has continued upgrading his Slinger, Wisconsin wide-area digipeater. In addition to installing the NetRom firmware at the site, he has replaced the old TNC with a new MFJ 1270B. The advantages of this upgrade will allow weaker signals to use the digi more reliably. This is the first NetRom digi on 145.09 in Wisconsin and therefore the full capabilities of NetRom are not yet available. Plans are being formulated to install NetRom in a series of .09 digis so that the reliable linking advantages can be realized.

New Digi On 145.03.....

There is a new digipeater on 145.03 located about 20 miles north of Chicago. The call is KK9H-1 and alias is 'WIN'. Because of its location, it is potentially a good link between Chicago and Milwaukee. Please try it.

Watchdog Timers.....

I've recently seen a couple of messages fly by dealing with watchdog timers, or the lack thereof. I am currently using a Kantronics KPC-1 TNC on the BBS here, and it has no timer. The WA9SXN high level digi uses a GLB TNC with an external watchdog board provided by GLB. We've added extra watchdogs to each of these units.

May I suggest a pessimist's rule: whether your TNC has an internal watchdog or not, ADD AN EXTERNAL ONE AS CLOSE TO THE ACTUAL KEYING CIRCUIT AS POSSIBLE. The watchdog in the TNC may work fine, but that won't help if a keying relay freezes closed (it happened here...). We put the watchdog right in the radio, as close to the final keying element as we could.

There are several ways to add such a circuit, depending on keying polarity, etc., but the easiest one I've come up with is a simple 555 circuit running as a "missing pulse detector" and driving a small reed relay. The relay contacts are in series with the keying line, and the 555 holds the relay closed. The 555 reset and trigger lines are driven by the keying line AHEAD of the relay. If the keying line stays active for longer than the 555's time constant, the 555 output switches and the relay opens. When the keying line returns to normal, the timer resets and closes the relay. This is about as fail-safe a system as possible, because if the timer fails,

the relay will open and dump the system. The only thing that could cause a problem is the relay freezing closed... the answer is to buy a good relay!!!.

A look at any of the timer handbooks should give an example of the missing pulse circuit. From there, modifying it to fit your station is up to you.

John - AG9V

New TNC-2 Firmware.....

It appears that the EXCELLENT WABDED TNC firmware has now been written for the TNC-2! (It was previously only available for the TNC-1). I've posted the documentation on the W9WI-1 BBS as PACKET/TNC2U.DOC; while I haven't read it yet, it promises to be a VERY nice piece of work. The firmware itself is in the YFILES area as TNC2U.ROM. (Format not yet known, I'll post a new message after I read the doc file!).

73 Doug - W9WI

AG9V Address.....

If you use the 1987 callbook address for correspondence to John, you will receive your letter unopened with one of those cute U.S.P.S. yellow labels informing you that his current address is: John Ackermann, 4565 Hilltop Drive, Little Suamico, Wisconsin 54141-8428. Save yourself a stamp and a week's delay by using his new address.

Unattended HF Packet.....

ARRL Bulletin NR 60 from ARRL Headquarters Newington CT July 13, 1987
To all radio amateurs:

FCC announced at the ARRL national convention that they had granted the ARRL request to permit for a six month period approximately 50 Amateur packet stations around the country to conduct unattended automatic operation while transmitting third party traffic on frequencies below 50 Mhz.

The amateur stations included under this special temporary authority will be able to participate as relay stations in a long haul HF net called SKIPNET. This net will operate on a single frequency in the 80, 40, 30 and 20 meter bands and stations will relay traffic via packet throughout the country. If these operations are successful, ARRL may decide to request a permanent rules change.

W8OLE PBBS in Marquette, Michigan.....

John - AG9V, has informed me that the W8OLE PBBS is up and running. Anybody with traffic for Upper Michigan can now leave a message on their local PBBS addressed to (call) @ W8OLE and it will be autoforwarded to Marquette, Michigan.

DAN - WB9TYT

continued on page 18

Results - 1987 Wisconsin QSO Party

* 1987 WISCONSIN QSO PARTY - OFFICIAL RESULTS *

The Wisconsin QSO Party is, once again, over for another year. Participation was down slightly from last years entries but the efforts put forth by many contestants was no less significant.

The plaque for best Single Operator-Single Transmitter operation goes to W9ZR for an impressive entry. Outstanding performances were also delivered by W9XT, KB9S, AC9C (1986 winner) and N9AW. The club standings saw a change in first place with the Kettle Moraine Radio Amateurs, one of the only clubs to score a gain over their previous entries, making their way to first place.

Once again, in the USA Division, we have many states to thank for making the 1987 Wisconsin QSO Party a fun event. Amateurs from 27 states and provinces entered. Special efforts were evident in the high scores achieved by KIOF, AH2U and AJ9C in some of our neighboring states. Our special thanks to all the participants from other states and provinces for helping to make the Wisconsin QSO Party an enjoyable and challenging contest.

Thanks, again, to all of you who participated in and helped make the 1987 Wisconsin QSO Party an enjoyable contest for all. Thanks also for your comments and suggestions. They continue to help us to make the Wisconsin QSO Party the fun event that it is. We invite you back again next year for more fun!

73's

Wisconsin QSO Party Committee

SOAPBOX *** 1987 WISCONSIN QSO PARTY *** SOAPBOX

This is too much fun for only once a year. Spring and Fall would be great." - N9KS.

It was sure great to keep hearing "thanks for the new multiplier" from quite a number of stations in almost every county I ran. I would like to offer the suggestion that, in the future, you would consider a separate category for the top mobile operation. Most people do not understand how difficult it is to run up a good contest score from the mobile..." - NOAKC/M.

"Although we could not hear Pennsylvanians on 40 meters, it sounded like a lot were again active this year judging from replies heard from Wisconsin stations. You might be interested to know that I sponsored a plaque for the highest scoring entrant from Wisconsin in the PA QSO Party which was won by NG9L. We had eight entries and picked out at least 8 others from Wisconsin in the Party Logs. We hope to continue to support the Wisconsin Party and hope that you will urge Wisconsinites to join us in October when a plaque will be offered if we have sufficient participation. Thanks again for a great Party - we are glad we came." - W3HDH.

"Once again your QSO Party was one of the best in the country. 40 Meters was the pits; long skip. Would like to see more stations on CW. Thanks to the mobiles; they really make it go." - KIOF.

"Darn! No 40m propagation to just across the pond (Lake Michigan). 75m was too noisy, but we

managed. I'll operate next year as W8YY from Michigan Tech. Univ." - NK8Q.

"Like the shortened hours of contest but my company also liked the hours. They all showed up and curtailed my operating time." - WA3UNX.

"From a CW viewpoint this has been the best QSO Party I've ever taken part in and I've taken part in many. As usual, the mobiles were the difference that made it an A-1 event. To N9EZ, AC9C and W9WI, many thanks for the many counties." - VE3KK.

"...to go where no one else has gone - an Amateur in Door county." - VE3MGY.

"I was not very smart to go to 80/75 after dark - all those PA, ILL, etc. kept covering up my signal. ...growled about others for sending at 35+ wpm." - K4GF.

"I entered this contest the hard way: Novice, one band, xtal control. And, if that were not bad enough, QRP. This QSO Party was my first. It was lots of fun. Watch out for next year cause I'll have a VFO and a General ticket!" - KA9UVD.

"Was disappointed with the lack of activity on 20m CW. Went to the band a number of times as the afternoon wore on but QSOs became nil." - W9HE.

"Thanks for another FB QSO Party. Just sorry I had to QRT early to go out of town on business." - K3JL.

"Enjoyed the party. Why do all WI stations get on at the same time? Why not spread your operation out and enjoy it?" - W5NR.

"Lots of fun with many good operators & some old friends." - W9DYG.

"My favorite contest. Can't wait till next year. Thanks to PA again. Many stations from that state involved." - NI9Z.

"This year was quite an experience, trying to operate base & mobile alone, but it was fun." - N9EFX.

"Quite a few QSO Parties running on the same weekend but Wisconsin had more activity than any of the others." - N7HJM.

"Extremely large amount of activity on 75m; wish there were more on 40 CW & phone. All in all, had a good time even with my "little gun" setup." - WD9IAB.

1987 WISCONSIN QSO PARTY SUMMARY - USA STATIONS

CALL	STATE	CW	SSB	QSO POINTS	WIS.	FINAL
				COUNTIES		SCORE
AK7J *	AZ	0	9	7		63
WB6DEJ *	CA	4	0	1		4
K3JL *	DEL	64	28	22		2024
K4GF *	FL	38	11	12		588
WK4F	FL	0	9	7		63
K4BAI *	GA	56	4	17		1020
N7HJM *	ID	40	1	12		492
AH2U *	IL	120	108	51		11628
NJ9Q	IL	24	69	38		3534
KA9BDK	IL	46	52	35		3430
K9KKX	IL	0	29	20		580
AJ9C *	IN	82	117	51		10149
NOFMR *	KS	106	12	20		2360
KB1VL *	MA	112	4	22		2552
KA1CLV	MA	74	0	18		1332

CALL	STATE	CW	SSB	QSO POINTS	WIS.	FINAL
				COUNTIES		SCORE
NK8Q *	MI	82	80	38		6156
W8QM	MI	66	67	36		4788
KIOF *	MN	126	118	56		13664
WAOQIT	MN	16	54	33		2310
NFOQ *	MO	0	24	16		384
VE1NH *	NB	8	0	4		32
WBOVKI *	ND	0	54	33		1782
N9ARX *	NE	112	27	30		4170
KB1PZ *	NH	18	0	7		126
WA2LBT *	NJ	100	10	20		2200
NJ2D	NJ	92	0	17		1564
W9IEM/7*	NV	0	12	9		108
W2DUN *	NY	106	0	22		2332
W2WSS	NY	34	0	10		340
WB2TKD	NY	0	19	13		247
N9AUG *	OH	104	20	29		3596
KB3WN	OH	8	41	22		1078
WBEAD	OH	24	0	9		216
VE3KK *	ONT	164	0	34		5576
VE3MGY	ONT	114	3	27		3159
W3HDH *	PA	152	28	32		5760
N3DLJ	PA	106	61	30		5010
K3SO	PA	84	59	30		4290
K3BIE	PA	86	39	24		3000
W3YA	PA	80	29	21		2289
WA3UNX	PA	66	0	18		1188
K3LVO	PA	52	10	17		1054
W3KJM	PA	36	12	14		672
KA3NH	PA	0	36	15		540
WB1DEU *	RI	72	0	15		1080
N4TG *	TN	46	30	23		1748
N5AFV *	TX	26	11	11		407
W5NR	TX	22	0	10		220
WBVEN *	WV	0	23	13		299

* CERTIFICATE

THE 1987 WISCONSIN QSO PARTY WAS SPONSORED BY:
THE WEST ALLIS RADIO AMATEUR CLUB, INC.
POST OFFICE BOX 1072
MILWAUKEE, WISCONSIN 53201

Wisconsin stations and club results on page 19

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WISCONSIN PACKETEER - continued from page 18
HF Facsimile Frequencies.....

East Coast:

9157.5, 17447.5 Khz Mobile, Alabama
4271, 9890, 13510 Khz Halifax, Canada
4793.5, 10185, 12201,
14671.5 Khz Washington, D. C.
8502, 12750 Khz Boston, Mass.
9389.5, 11035 Khz Brentwood, New York
3357, 8080, 10865,
16410 Khz Norfolk, Virginia

West Coast:

8459 Khz Alaska
4802.5, 7770, 9440, 11090,
13627.5, 13862.5 Khz Hawaii
8646, 17410.5 Khz San Diego
4346, 8682, 12730,
17151.2 Khz San Francisco

Other FAX signals:

17670 Khz AP News Service
18435 Khz R News Service
Harry - WB2IB0

1987 WISCONSIN QSO PARTY SUMMARY - WISCONSIN STATIONS

CALL	COUNTY	QSO POINTS			FINAL	CLUB AFFILIATION
		CW	SSB	MULT	SCORE	

MULTI OPERATOR - SINGLE TRANSMITTER						
WB9QCY *	SHEBOYGAN	0	289	90	26010	SHEBOYGAN COUNTY ARC
ND9Z	OUTAGAMIE	96	202	77	22946	GREEN BAY MIKE & KEY CLUB
KW9E	MILWAUKEE	154	115	68	18292	KETTLE MORaine RA
K9GDF	MILWAUKEE	172	73	63	15435	W/K ARC OF GREATER MILW
NO9M	DANE	198	0	44	8712	FOUR LAKES ARC
SINGLE OPERATOR - NOVICE/TECHNICIAN						
KA9VOK *	WAUKESHA	46	66	25	3300	KETTLE MORaine RA
KA9UVD *	DANE	18	0	9	162	
KA9TNJ		10	0	4	40	
SINGLE OPERATOR - SINGLE TRANSMITTER						
W9ZR **	BROWN	300	395	108	75060	PRINCE RUPERT RADIO CLUB
W9XT *	DODGE	158	454	108	66096	KETTLE MORaine RA
KB9S *	PEPIN	280	322	102	61404	WABASHA AREA ARC
AC9C *	SAWYER	370	252	87	60614	GREATER RICE LAKE CC
N9AW *	MILWAUKEE	196	356	97	53544	W/K ARC OF GREATER MILW
W9WAQ *	DODGE	354	197	80	44080	WATERTOWN ARC
NB9C *	DANE	326	186	85	43520	FOUR LAKES ARC
KC9NH *	WINNEBAGO	0	398	109	43382	FOX CITIES ARC
W9UP *	LA CROSSE	0	450	96	43200	RIVERLAND ARC
WB9SBD *	VERNON	264	184	84	37632	ARC OF CENTRAL WISCONSIN
WA1UJU *	WAUKESHA	218	203	89	37469	KETTLE MORaine RA
NI9Z	SHEBOYGAN	322	100	82	34604	SHEBOYGAN CO. ARC
K9LGU	CALUMET	280	123	81	32643	CALUMET ARES
K9OSH	WAUKESHA	30	327	90	32130	KETTLE MORaine RA
NI9U	WAUKESHA	260	162	76	32072	KETTLE MORaine RA
N9DBV	WASHINGTON	0	329	96	31584	KETTLE MORaine RA
WA9HRO/9	DANE	234	132	74	27584	FOUR LAKES ARC
W9HE	WAUKESHA	400	0	68	27200	
WA9TZE	MILWAUKEE	160	217	70	26390	W/K ARC OF GREATER MILW
W2WOE	WALWORTH	406	0	65	26390	
AJ9U	MILWAUKEE	208	154	70	25340	W/K ARC OF GREATER MILW
K9WTF	WAUKESHA	0	284	83	23572	WEST ALLIS RAC
KY9P	WASHINGTON	200	113	69	21597	OZAUKEE RADIO CLUB
WB9QDT	COLUMBIA	0	316	43	20088	
NK9G	MILWAUKEE	84	189	70	19110	W/K ARC OF GREATER MILW
N9EZ	MILWAUKEE	354	22	39	18664	KETTLE MORaine RA
NG9L	WAUKESHA	52	190	77	18634	
KV9V	SHEBOYGAN	198	64	68	17816	SHEBOYGAN COUNTY ARC
W9DYG	MILWAUKEE	310	0	57	17670	
WB9MSM	DODGE	110	141	65	16315	WATERTOWN ARC
KB9WC	GREEN LAKE	0	208	76	15808	GREEN FOX ARC
NOBMP		50	177	49	15623	GREATER RICE LAKE CC
NA9M	DANE	298	0	52	15496	FOUR LAKES ARC
NOAKC/M	EAU CLAIRE	0	215	48	14320	
W9RF	SHEBOYGAN	260	0	53	13780	SHEBOYGAN COUNTY ARC
KR9S	SHEBOYGAN	52	154	59	12154	SHEBOYGAN COUNTY ARC
N9BBN	JUNEAU	70	122	60	11520	ARC OF CENTRAL WISCONSIN
W9WI	DANE	170	38	47	11276	GREATER RICE LAKE CC
N9DGL	SHAWANO	56	133	59	11151	SHAWANO SCHOOLS
K9OSC	WAUKESHA	218	4	47	10434	KETTLE MORaine RA
W9CBE	DANE	214	0	45	9630	
KE9AS	MONROE	0	156	61	9516	ARC OF CENTRAL WISCONSIN
N9HR	JEFFERSON	0	148	64	9472	WATERTOWN ARC
N9AU	MILWAUKEE	158	51	45	9405	WEST ALLIS RAC
N9KS	WAUKESHA	0	167	26	8842	KETTLE MORaine RA
WB9QFX	WINNEBAGO	0	131	66	8646	FOX CITIES ARC
KB9W	POLK	166	12	48	8544	
NC9G	PRICE	96	67	52	8476	FLAMBEAU
W9TP	SAUK	190	0	44	8360	YELLOW THUNDER ARC
WB9AZH	WAUKESHA	0	164	47	7708	KETTLE MORaine RA
NF9B	WAUKESHA	0	133	57	7581	
KD9GS	WAUKESHA	94	76	44	7480	KETTLE MORaine RA
KE9C	JEFFERSON	0	147	50	7350	WATERTOWN ARC
NF9Q	SHEBOYGAN	64	72	52	7072	SHEBOYGAN COUNTY ARC
ND9P	WAUKESHA	68	75	48	6864	
N9BHQ	MONROE	0	131	52	6812	ARC OF CENTRAL WISCONSIN
W9UB	WAUKESHA	44	104	46	6808	KETTLE MORaine RA

1987 WISCONSIN QSO PARTY SUMMARY - WISCONSIN STATIONS (continued)

CALL	COUNTY	QSO POINTS			FINAL SCORE	CLUB AFFILIATION
		CW	SSB	MULT		
WB9IXS	WAUKESHA	40	76	47	5452	KETTLE MORaine RA
K9JIG	EAU CLAIRE	0	107	50	5350	
WD9IAB	DANE	78	49	42	5334	
W9IBL	JEFFERSON	0	76	54	5104	WATERTOWN ARC
N9DFR	BROWN	0	92	36	4812	GREEN BAY MIKE & KEY CLUB
K9BED	MILWAUKEE	112	4	32	3712	W/K ARC OF GREATER MILW
WA9KCU	DODGE	0	84	43	3612	WATERTOWN ARC
W9DMI	MILWAUKEE	102	28	27	3510	W/K ARC OF GREATER MILW
K9EP	ROCK	0	75	36	3200	GREATER BELOIT ARC
W9CHD	WAUKESHA	62	28	31	2790	
KC9BV	WAUKESHA	0	73	33	2409	KETTLE MORaine RA
N9EFX	DODGE	0	83	10	2330	WATERTOWN ARC
KW9M	SHEBOYGAN	84	0	27	2268	SHEBOYGAN COUNTY ARC
WB9WRW	WAUKESHA	0	101	10	2010	KETTLE MORaine RA
WB9HCO	WAUKESHA	0	101	10	2010	KETTLE MORaine RA
K9FHI	DODGE	0	51	37	1887	ROCK RIVER RADIO CLUB
N9FVV	DANE	76	0	24	1824	FOUR LAKES ARC
W9FJE	MILWAUKEE	0	52	30	1560	WEST ALLIS RAC
KA9VIA	SHEBOYGAN	0	50	31	1550	SHEBOYGAN COUNTY ARC
WB8ULZ	KENOSHA	52	16	22	1496	
W9ODV	SHEBOYGAN	0	41	30	1230	SHEBOYGAN COUNTY ARC
KA9CPW	JEFFERSON	0	45	20	900	WATERTOWN ARC
KA9QPH	JEFFERSON	0	41	20	820	WATERTOWN ARC
W9YVE	JEFFERSON	0	40	18	720	WATERTOWN ARC
KA9USV	WAUKESHA	2	27	21	609	KETTLE MORaine RA
W9RTP	DANE	18	12	17	510	TRI COUNTY ARC
WB9NRK	BROWN	0	28	17	476	GREEN BAY MIKE & KEY CLUB
K9DWS	SHEBOYGAN	0	25	18	450	SHEBOYGAN COUNTY ARC
KC9CI	WASHINGTON	0	32	8	256	KETTLE MORaine RA
W9YCV	MILWAUKEE	22	1	10	230	WEST ALLIS RAC
WD9IWK	WAUKESHA	0	33	6	198	KETTLE MORaine RA
KA9VDU	DANE	0	18	10	180	
W9HR	KENOSHA	0	8	7	56	
K1TMM	MILWAUKEE	0	13	3	39	KETTLE MORaine RA

* CERTIFICATE

** PLAQUE

1987 WISCONSIN QSO PARTY CLUB SUMMARY

PLACE	CLUB NAME	SCORE	1986
1	KETTLE MORaine RADIO AMATEURS	293862	(280884)
2	W/K ARC OF GREATER MILWAUKEE	147041	(179553)
3	SHEBOYGAN CO. AMATEUR RADIO CLUB	116934	(107297)
4	FOUR LAKES AMATEUR RADIO CLUB	97136	(17760)
5	GREATER RICE LAKE CONTEST CLUB	90713	(540970)
6	WATERTOWN AMATEUR RADIO CLUB	90703	(111477)
7	PRINCE RUPERT RADIO CLUB	75060	
8	ARC OF CENTRAL WISCONSIN	65480	(38250)
9	WABASHA AREA AMATEUR RADIO CLUB	61404	
10	FOX CITIES AMATEUR RADIO CLUB	52028	
11	GREEN BAY MIKE & KEY CLUB	44042	(31407)
12	RIVERLAND AMATEUR RADIO CLUB	43200	
13	WEST ALLIS RADIO AMATEUR CLUB	34767	(110313)
14	CALUMET ARES	32643	(31902)
15	OZAUKEE RADIO CLUB	21597	(33317)
16	GREEN FOX AMATEUR RADIO CLUB	15808	
17	SHAWANO SCHOOLS	11151	
18	FLAMBEAU	8476	
19	YELLOW THUNDER AMATEUR RADIO CLUB	8360	(16254)
20	GREATER BELOIT AMATEUR RADIO CLUB	3200	(5336)
21	ROCK RIVER RADIO CLUB	1887	
22	TRI COUNTY AMATEUR RADIO CLUB	510	

THE 1987 WISCONSIN QSO PARTY WAS SPONSORED BY:
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QUIZ NO. 7 IN A SERIES

Unusual Trivia Quiz



By Gene Santoski, K9UTQ
1220 18th Avenue South
Wisconsin Rapids WI 54494

1. What do the letters MUF represent?
2. What is the formula for power?
3. What states does the 9th Call District encompass?
4. What does QNF mean?
5. With a positive temperature coefficient, a resistance will increase with increased temperature - true or false?
6. What kind of parasitic antenna employs full-wave loops?
7. What is the measure of mutual inductance between two coils called?
8. What are the 80M sub-bands for Extra Class?

9. What company made the "Signal Shifter"?
10. What is the current term of an Amateur license?

Please submit your answers to K9UTQ; address above. After 12 quizzes have been published, the most correct answers will win a Call Book or an ARRL Handbook, or something along those lines! The answers to the July quiz are on page 7.

Let the active Radio Amateurs in the Wisconsin area know about what's happening in Ham Radio in your area.. write it up for Badger State Smoke Signals!



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